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CHRONIC MIDDLE EAR SUPPURATION AND SURGICAL INTERFERENCE*

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The remedial agencies employed by the specialist of today will be understood and used more or less by the general practitioner of tomorrow. Some facts in medicine, however, penetrate only slowly into the greater body of practitioners and of the laity. A quarter of a century was needed for the dissemination of the all-important knowledge of tuberculosis, so we can understand that less general and less easily comprehensible subjects must wait longer. This psychological fact furnishes the excuse for again touching a subject which may be quite familiar to many. The matter under consideration is a rather great one, and I should like to confine myself to dwelling upon a few questions which the general practitioner is justified in asking:

1. Does a chronic middle ear suppuration endanger the health and the life of a patient?
2. Can a chronic middle ear suppuration be cured?
3. Is it necessary to resort to a capital operation in order to cure a chronic middle ear suppuration?

4. Does the function of the ear suffer in consequence of a capital operation?

5. How much time is consumed by the after-treatment of the total opening of the middle ear cavities?

Questions one and two need not be dwelt upon any longer before physicians, with the proviso, however, that there seem to exist some cases in which a perfect cure cannot be obtained. All text-books treat the subject. Of the 14,381 patients who died in the Obachow hospital, in St. Petersburg, in seventeen and one-half years, one out of every 103 died in consequence of a suppurative otitis media. (N. Wesselowsorow) (Pitt 1:158; Gruber 1:232) (Archiv fuer Ohrenheilkunde vol. 68, p. 147.)

Question 3. This question is, of course, a very important one, and we must say that it depends entirely upon the type of case we are confronted with. The avenues of propagation from the middle ear are numerous, and it appears to us that we cannot say with certainty how a given case may terminate.

Politzer sums the subject up by saying: (1901, pp. 445 and 446) "In conclusion we may dwell upon the question whether it is permissible to perform the

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radical operation for the cure of obstinate, uncomplicated middle ear suppurations to such an extent as it is done by a number of specialists. Those who take this radical standpoint refer to the deep seated changes in the antrum, and in the mastoid process, which is chronic middle ear suppurations take a course without showing any symptoms and which cannot be demonstrated clinically. On account of the favorable prognosis which is furnished by the early operation, we should not wait for the appearance of dangerous symptoms, because the latter make the prognosis of the result after operation less favorable."

"Contrary to this, I should like to emphasize that in numerous cases middle ear suppurations can exist for decades, even during a long life, without complications, and that we frequently succeed in curing without radical operation a chronic middle ear suppuration by determined local treatment. Granulations and polyps must be removed from the tympanic cavity and the attic, rough particles of bone must be scraped, on the outer wall of the attic, the hammer and anvil must be removed."

W. Sohler Bryant (Treatment of Chronic Purulent Otitis Media, with Illustrative Cases; the *International Journal of Surgery*, May, 1905) says: "We shall discuss only those cases which, though caries may sometimes be present, offer hope of at least as rapid a convalescence or a more satisfactory result with the milder measures than if more radical means were used. In their treatment, the first step is the removal of all fetid detritus, epithelium and retained secretions. Next, the granulations or polypi are removed, and free drainage is established. The first cleansing is assisted by the ear syringe and solutions of bicarbonate of soda. The ear is then dried with cotton. After this treatment caries usually disappear rapidly. When the perforations are not sufficiently large to

admit a free flow of the cleansing fluid the middle ear syringe is used or the perforations are enlarged with a knife. In some cases I have found cupping very serviceable."

"At first the patient should be seen every day. On the second visit, if fetor is present, and if granulations have reformed, the cleaning should be repeated as before, the tympanum dried with cotton, and an alcoholic solution of boric acid instilled. If, after the first visit, caries appears to be the cause of the fetor, the spot is wiped with a ten to twenty per cent. solution of nitrate of silver. A rapid disappearance of the caries may still be expected."

"Conclusion: From the foregoing cases we are justified in believing that if careful manipulation is combined with cleanliness, even in the most obstinate cases there still appears to be hope of effecting a cure in chronic purulent otitis media without a capital operation."

Milton J. Ballin (Ossiculectomy Under Local Anesthesia in the Treatment of Chronic Suppurative Otitis Media; *New York Medical Journal* and *Philadelphia Medical Journal*, February 17, 1906), comes to the following conclusion: "It frequently happens with any new operative measure that it is liable to be carried to extremes, and as Politzer correctly states the suppuration does not always cease after the extraction of the hammer and incus, nevertheless, the writer advocates this painless method of ossiculectomy as a preliminary operation in every case of chronic suppuration of the middle ear in which medicaments of all kinds have proved of no avail after an honest trial, as we are often able by this means to bring about a cure of the otorrhœa, thereby sparing our patients the ordeal of being compelled to undergo a radical mastoid operation which is not always followed by the best results and is frequently accompanied by a protracted and painful after-treatment."

George L. Richards (The Non-Operative Treatment of Chronic Otitis Media Purulenta, With Special Reference to the cure of Pyokturia; The *Laryngoscope*, St. Louis, September, 1905), says: "The brilliant results obtained by radical surgery in cases of chronic purulent otitis media since the publication of Macewen's book, and the experience of aurists in general that most of the cases of brain abscess and sinus disease are the result of an old chronic otitis have led us to believe that nearly every case of chronic discharge of the ear is a submerging volcano and of constant potential danger to its owner. The result has been that practically every case of chronic discharge of the ear has had the question of a serious radical operation, either removal of the ossicles or of a radical mastoid, considered, provided he has come in contact with an aurist who has had any experience with these operations."

"While in no sense advising against such operations when they are urgently indicated, as a glance at my own publications on the subject will easily show, I am nevertheless convinced that there are a large number of cases of chronic otitis where operative interference is not imperatively demanded, and where the persistence, for a longer or shorter time, of milder measures will either achieve entire success or bring about a condition easily under the control of the aurist, and of more satisfaction to the patient than a brilliant operation. Especially is this the case if the chronic purulent discharge is not accompanied by marked caries or by constitutional symptoms, and if the function of audition is fairly good. Many such patients have very good hearing, bid fair to live out the balance of their days, and insist upon our trying some form of local treatment before they will even consider the question of an operation. When questioned as to the certainty of a cure after an

operative procedure, we have to admit that even the radical mastoid operation is not always certain to cure, usually requires a more or less prolonged period of after-treatment, and is sometimes followed by recurrence; that even the operation of ossiculectomy now and then makes the hearing worse and may have to be followed by the more radical operation in order to produce what may be called an absolute cure.

Dench: (The Radical Operation in Chronic Middle Ear Suppuration, *Archives of Otolaryngology*, February, 1905, page 15, et. seq.), states that during the eight years ending September 1st, 1902, 14,487 cases of chronic middle ear suppuration were treated in the New York Eye and Ear Infirmary, in 98 cases the radical operation was performed. He states that the shortest time in which a cavity has healed, under skin grafting, has been three and a half weeks; the longest about four months. Where the wound was allowed to heal by cicatrization, the shortest period of healing has been about eight or ten weeks, and the average period much longer than this. By simple operation of ossiculectomy and curetment, 53 out of 92 cases were cured, 25 improved, two did not improve, and in twelve the result was unknown.

In Halle *Archiv fuer Ohrenheilkunde*, Vol. 65, 1st and 2nd part), 450 chronic middle ear suppurations were treated from April 1, 1904, to March 31, 1905, and in about one-fifth of this number the radical operation was performed. Of course we must remember that Halle is one of the Meccas for obstinate cases.

In order to receive an expression in regard to the after-treatment after the total opening of the middle ear cavities, the following questions were sent to aurists of acknowledged experience and reputation in the United States:

1. What is, in your experience, approximately, the average duration of the after-treatment after the total opening of the middle ear cavities (rad-

ical operation) until epidermization has taken place?

2. How long, as a rule, do you wish to have the patient under continual, personal observation? (Not including occasional visits later on, at intervals.)

3. What is your experience in regard to the change in hearing after the operation? (In a general way.)

Some of the answers received by me are herewith reproduced more or less completely.

1. "Dr. F. A. 1. From 2 to 3 months. 2. For 6 months. 3. In a majority of cases it is either improved or unaffected.

2. "Dr. C. S. B. 1. One to two months. 2. Three months. Generally better; sometimes unchanged; deterioration rare."

3. "Dr. F. J. B. 1. Six weeks to 3 months. 2. Daily visits for six weeks at least. 3. Removal of ossicles of course causes deafness, but if cavity does not fill up with granular tissue, patient will still hear some, but just how much I can't say."

4. "Dr. T. P. B. 1. In a general way, I should say that from six to ten weeks would be a fair average time for a complete recovery to take place in the average cases under my care, although I have been fortunate enough to see complete healing take place in three weeks after a very radical Schwartze-Stacke operation. On the other hand, I have seen apparently favorable cases take nine months to a year. 3. In my experience, hearing is quite frequently bettered after operation; although, of course, this depends entirely on the conditions found in the middle ear at the time of operation. If there is much granulation tissue in the middle ear I look for an improvement."

5. "Dr. W. S. B. 1. Three to eight weeks; average four weeks. 8. Until epidermization has taken place. 3. Usually marked improvement, none diminished."

6. "Dr. W. P. E. 1. From three to six months. 2. For the same period. 3. In the vast majority of cases the hearing is much poorer after the operation. In a comparatively small percentage of the cases the hearing is the same, while in a very few cases the hearing has been slightly improved."

7. "Dr. P. F. The average length of time after the radical operation until epidermization has taken place is three to five weeks, but there is a good deal of variation depending on the general condition of the patient as well as on

other factors. The cavity seems to do as well under nitrate of silver in increasing concentration, or drying powders such as xeroform, as with grafts. I like to keep the patients under personal observation for, say, four weeks. The question of acuity of hearing, after operation, is another complicated one. Much depends upon the severity of the disease for which the excision of the mastoid was performed. In a general way, I should say that the operation has little effect on audition except in so far as the removal of debris, carious bone, polypi and so on from the tympanic cavity tends to improve hearing if anything."

8. "Dr. J. H. 1. As to your first question, I consider seven weeks an average duration of after treatment. Though I have repeatedly shown patients five weeks after operation with completely epidermized and dry cavities. 2. After that time I usually do not see them oftener than once or twice a month. 3. With one exception I always saw improvement of hearing, often to twice and three times the original distance. Of course, I am very conservative in the drum cavity, and have often preserved the mallet and anvil when these two ossicles were normal and the cavity well epidermized. In all those cases, when they showed trouble later on, it was not in the attic, but in the aditus ad antrum and the antrum. This experience coincides with the experience of other men across the ocean. I had repeatedly a chance to see patients who were operated on in Germany. One man from Halle, and at present one from Koenigsberg, who had both scales and granulations in the antrum and aditus.

"I operated as early as 1893 and 1894. That time, of course, with perpetual opening behind the ear and Thiersch's grafts and flaps from the scalp. Since 1898 I close the retroauricular opening and do the whole after-treatment through the wide opening in the concha. These results are only possible when I attend to every detail myself. When I leave anything to an interne I do not expect equally good results.

"We must never forget that the best we can do for the patients is to leave a large scar on poorly nourished, often nearly diseased, bone or dura and therefore I am not very liberal in my indications for radical operations. The best results we got there, where the operation really was not indicated, and other ways had given a better and quicker result."

9. "Dr. C. R. H. 1. Approximately the average duration of the after-treatment after the

total opening of the middle ear cavities until epidermization has taken place, is from six weeks to twelve months, varying of course with the extent of the operation that has been made necessary by the destructive process at work. 2. I wish to have the patient under my continual personal observation after operation for at least one month. 3. The change in hearing after the operation is usually for the better. Sometimes it is not improved, and very rarely it is made worse. This, of course, depends upon the amount of destruction that has taken place before the operation was begun."

10. "Dr. E. E. H. 1. Four to eight weeks. 2. At least three weeks. 3. Improved."

11. "Dr. F. L. J. 1. Months. I find often a slight discharge after many months. 2. Several months. 3. Little or none. Occasionally improvement."

12. "Dr. C. J. K. 1. Six months. 2. A year. 3. Nearly always made worse."

13. "Dr. H. K. 1. Daily dressings may be necessary for four weeks to four months, and longer. 2. The preservation of hearing is in a radical operation negative, that is, if the patient had hearing before the operation, he is likely to lose or weaken it. Life is higher than hearing. The surgeon should observe and treat the patient until a permanent status is established, otherwise he may be surprised by an intracranial complication which may become fatal in a short time."

14. "Dr. G. A. L. 1. Three to eight weeks, probably averaging about five or six weeks before complete epidermization takes place. I was rather surprised this winter to have one heal in about two days less than two weeks. This was in a child. I think, however, that the hospital cases are less rapid than private ones, although private ones are not very common. 2. About eight weeks. This depends a little on how soon the epithelium covers the groove between the promontory and the facial canal. This I try to leave free so that a tough skin will not cover it in. It seems to me that the hearing is better preserved if this is so left. 3. In old adults I have not been able to preserve any hearing so far, but up to middle age and in children the hearing is sometimes improved. In fact, it has been in one little girl where a double radical operation was done. I sent her to the ——— School to have the lip language taught while she yet had some hearing. She heard so well that they sent her to a regular school because they said she heard too well for their school. Her

mother states that she hears much better now than before the operation, and she can converse with her, probably with a slightly raised voice, with one whole room intervening. Some other children have retained serviceable hearing, but I have not any definite tests to give for the children, because they are so difficult to test, etc."

15. "Dr. R. L., Jr. 1. Ten weeks. 2. Until discharged cured. 3. Generally a further loss."

16. "C. H. M. 1. Eight to ten weeks. 2. Three months. 3. Occasionally a little worse; occasionally a little improved; as a rule, no change of any consequence."

17. "Dr. J. F. McK. 1. Seven weeks. 2. Ten weeks. 3. Diminished."

18. ("Name mislaid.") 1. Three months. 2. Till cured. 3. Usually stationary, or lowered."

19. "Dr. T. R. P. 1. Three to seven months. 2. Until all discharge has ceased. 3. In most of my cases it has been improved."

20. "Dr. N. H. P. 1. The duration of after-treatment in radical operations varies in direct ratio to the intelligence, carefulness and thoroughness of the after-treatment, provided the operation has been thorough, and that no tuberculosis or dyscrasia (diabetes, etc.) is present. The shortest time is six weeks; the longest three months, approximately of course. There have been cases that have taken much longer, that have required further operating, etc. But I have come to regard from six to twelve weeks as the normal duration of after-treatment. 2. The second question is answered, in part, by the first. After the ear becomes dry and thoroughly epidermized the patient is dismissed, with instructions to report if there is further discharge, or at least every six months or two years. When the former occurs it is usually found to come from the tube. I regard this as entirely separate and apart from any consideration regarding the radical operation. 3. Before operation I invariably have a thorough tuning fork (functional) test made of the patients to ascertain (a) whether there is stapes ankylosis; (b) whether there is labyrinthine involvement (capsule or nerve). In cases where these are found absent, the rule is that the hearing is improved temporarily or permanently, or unchanged."

21. "Dr. F. R. P. 1. After the radical operation I believe that the average duration of after-treatment in my cases has been approximately four weeks. Sometime ago I endeavored to ascertain somewhat definitely from my case records the duration of after-treatment, but I am

sorry to say the records were too ill kept to furnish definite data. 2. I keep patients in the ward or in their rooms for three weeks subsequent to operation, at least. This I make a practically invariable rule, as I have had several unfortunate experiences in cases whom I allowed to leave the hospital too early. 3. I do not believe any definite predication can be made before operation as to the effect the procedure will have on the hearing. I believe it is quite as often improved as diminished, and it quite as frequently remains unaltered."

22. "Dr. B. A. R. 1. Six to ten weeks. 2. Most of that time, as synechial growth or stenosis is possible throughout it. 3. No notable difference in most cases; loss in the minority, all probable gain having come during the previous treatment."

23. "Dr. J. M. R. 1. Three to six months. 2. Four months. 3. I have noticed very little."

24. "Dr. H. O. R. 1. Think the average would reach nearly three months. 2. In hospital two weeks; daily or bi-daily visits after this. 3. In some instances not affected, but about as often made worse."

25. "Dr. S. O. R. 1. One to six months. 2. A year at least, for a cure. 3. Depends on the case and what the operation involves."

26. "Dr. G. L. R. 1. Five to eight, or even ten weeks, depending on size cavity and amount of bone it was necessary to remove. 2. Until epidermization has taken place. 3. Improved usually, since these patients have very bad hearing when operated upon."

27. "Dr. C. W. R. 1. Average about eight weeks. 2. I do not wish to see them for a period longer than six months after the wound has completely epidermized. 3. In a general way I will say that the hearing is not appreciably altered after the operation."

28. "Dr. J. E. S. 1. The average duration of after-treatment in a very large percentage of the total is from six to eight weeks, there having been several finished up in from four and a half to five weeks, a few taking nine or ten weeks, but the great majority of them were discharged cured in seven weeks. I have two cases, one of which took sixteen weeks, and the other seven months, for a complete cure, and these I did not include in making my average duration. 2. I always wish to keep them under my "continued personal observation" until they are completely cured, because I think the after-treatment is quite as important in the effecting of a cure as is the operation itself. 3. As to No. 3, my experience is that in the great majority of cases the hearing remains practically unchanged."

29. "Dr. S. S. 1. The approximate average, allowing for unfavorable cases, should not in our

experience be placed at less than five or six months. 2. It is hardly possible to state a definite time. There is no iron-clad rule. After a cure seems complete the frequency of the visits should be gradually reduced. By the end of the sixth week after epidermization a patient is calling once every ten days or so. By the end of the fourth month we generally instruct the patient to call once every two or three months. This we keep up indefinitely. 3. Many cases remain little if any changed. If anything, more seemed to be benefited than really harmed, as regards the hearing. Some lose what hearing they have."

30. "Dr. F. W. 1. Four months. 2. Until epidermization is complete. 3. Usually somewhat reduced from acuteness preceding operation."

31. "Dr. H. W. Complete epidermization has taken place from three months to a year and a half. I believe, however, the process would have been completed sooner had I not over-treated the patients with too frequent dressings. In one case the hearing was improved so that telephone conversations could be carried on. The other cases were entirely deaf with loss of all forks below 512."

If we compile these statements in a table (see below), we find that the average duration of the immediate after-treatment is two months and 26 days.

				Average time
1....	2	to	3 months	2.50
2....	1	"	2	1.50
3....	1.50	"	3	2.27
4....	1.50	"	2.50	2.00
5....	0.75	"	2.00	1.37
6....	3.00	"	6.00	4.50
7....	0.75	"	1.25	1.00
8....	1.75	"	1.75	1.75
9....	1.50	"	12.00	6.75
10....	1.00	"	2.00	1.50
11....				
12....	1.00	"	4.00	2.50
13....	0.75	"	2.00	1.37
14....	2.50	"	2.50	2.50
15....	2.00	"	2.50	2.25
16....	1.75	"	1.75	1.75
17....	3.00	"	3.00	3.00
18....	3.00	"	7.00	5.00
19....	1.50	"	3.00	2.25
20....	1.00	"	1.00	1.00
21....	1.50	"	2.50	2.00
22....	3.00	"	6.00	4.50
23....	3.00	"	3.00	3.00
24....	1.25	"	2.50	1.87
25....	1.00	"	6.00	3.50
26....	2.00	"	2.00	2.00
27....	1.50	"	2.00	1.75
28....	5.50	"	5.50	5.50
29....	4.00	"	4.00	4.00
30....	3.00	"	15.00	9.00
Average, 2 months and 26 days...				83.86

Conclusions.

1. Only exceptionally a chronic middle ear suppuration which does not respond to mild treatment without more thorough surgical interference, should be allowed to continue. The less radical procedures should first be considered and the more radical measures should not be delayed too long.

2. The mastering of the technic of treatment in its details is imperative.

3. The public and the profession in general have only begun to realize what can be done and what should be done in a chronic middle ear suppuration.

I express my obligation to all the gentlemen who have been kind enough to furnish me with the data quoted, and who thus enabled me to give a reliable picture of the subject matter, as it presents itself today in the United States.

DISCUSSION.

J. C. Huizinga, Grand Rapids, said that he thought that mortality rate was slightly higher than stated. Attention to Eustachian tube in many cases of chronic otitis media will be of benefit.

A. E. Bulson, Jackson: If conservative measures are not curative in a reasonable time, radical operation is indicated. The profession is more alive to the importance of these affections than ever.

Dr. Amberg: An irregular, "steeplechase" temperature is suspicious of lateral sinus involvement. He does not by any means intend to give an impression of undue conservatism, but believes local treatment should be tried and is often curative. Radical operation is not done frequently enough in this part of the country. But all such surgical procedures require special skill, and should not be attempted without adequate training. The responsibility for a case begins when a diagnosis of otitis media is made.

A COMPARISON OF THE OLD TIME AND THE MODERN PHYSICIAN*

C. L. GIRARD, M. D.,

Escanaba.

"Look here upon this picture and on this, the counterfeit presentment of two brothers."

Once there was a man who enjoyed the respect, the confidence, and the affection of all in his community; their respect, on account of his blameless life and great usefulness; their confidence, on account of his knowledge and established discretion; their love, in consideration of his sympathetic heart and merciful deeds. High souled he was, and if some alloy was mixed with the

gold of his many virtues, one at least remained untainted, his admitted disinterestedness. This man was the family physician, and he held a high place of honor in his locality. Whether the medical profession in our own time presents the same aspect as in the foregoing picture, and whether the modern physician enjoys the same prestige as formerly, let the frequent articles on the subject in current medical literature, let the numerous complaints heard in private con-

*Read at the Jackson meeting of the Michigan State Medical Society, May 23-25, 1906

versation and in the medical assemblies, give answer. Far from being optimistic in character, the note they generally sound is mournful in the extreme; "the passing of the general practitioner, the family physician a thing of the past," etc., is the burden of the clamor. This too despondent view proceeds, in my opinion, from insufficient consideration of the causes that led to the present state of affairs; these we shall study together and endeavor to draw from their careful analysis the remedies that may bring betterment, if not salvation.

Among the manifold causes that have brought the profession to its present unsatisfactory status, some came with the revolution of the wheel of time and were, partly at least, beyond control, while in most cases prudence and farsightedness might have availed much to properly direct the impelling forces and to mitigate their direful effects when the blow was inevitable.

The ignorance of the people a hundred or more years ago was profound and universal, and made them prone to see the marvelous in things which today would be playthings for children. So, when the old time physician, with his literary culture and scientific attainments, gave his advice and prescribed his treatment, his opinion and himself met with a respect and deference little short of the superstitious; whereas, today unkind criticism too often awaits him and his actions.

Perhaps one may ask, "Is the modern practitioner of less ability? Is his skill in his art inferior to his professional ancestors? Far from it. As a medical scientist and a surgeon he enormously outranks him. But these are attainments of which the public is no fit judge, and feeling that they are beyond its ken, it seeks in general knowledge and literary culture a criterion upon which to base its estimate of the modern healer. And we must admit that the people of

today have made some strides in culture and information. In fact, they have attained the critical age where "a little knowledge is a dangerous thing."

On the other hand, it must be also admitted that, from the second half of the last century up to the beginning of the present one, the forensic knowledge of the physician, I mean his general education and culture, has, compared with popular progress in the same, fallen far behind; and the estimate of his medical ability, as judged by his general knowledge, has proportionately declined. It is with a feeling of great encouragement that I have seen the general awakening of late in the several medical institutions, in exacting of their prospective alumni a higher standard of preliminary education, and I fondly hope that not only will it be adopted by all, but raised still higher. This farsighted policy can not but have the happiest effect in elevating the profession in the esteem of an hypercritical public.

The nihilism in therapeutics, openly avowed by the lights of the medical profession, has produced first, indifference, and afterwards neglect. At the same time the exuberance of chemical and pharmaceutical establishments, bolstered up by extremely clever advertising circulars edited by able medical assistants (if you please), has effected a dizzy muddle, from which the older practitioner turns away with disgust, and in which the fledgeling gets himself helplessly tangled. In fact, the mere reading of a moiety of the current literature upon the new pharmaceuticals would use up a life time. As a matter of course, these are either untried or insufficiently so, while they distract the energies of the profession from the study of a few really valuable products, whether of ancient or relatively modern origin. Hence, there is repeated disappointment in the treatment of disease and consequent encroachments of the

surgeon in the domain heretofore allotted to medicine. And again, by a just retribution, the measure meted out by the surgeon to the general practitioner has in turn been meted out to him by the specialist.

An earnest study of therapeutics, as founded upon serious physiological knowledge and the great principles of general pathology, is the remedy to be applied. Let the physician treat the condition of his patient, not the name of a disease. Eliminate a toxin, support a flagging heart, relieve an unobstructed circulation, promote or retard metabolism by well-known and long-tried agents, and do not neglect little means, and you shall prove yourself useful to your patients, and your usefulness will compel respect.

If competition is the life of trade, it also gives it a death blow when carried to excess, and this leads us to the consideration of our third point. Before medical institutions became so numerous, the number of medical practitioners was relatively small and by the law of supply and demand, their services were highly prized and remunerated accordingly. Hence, professional jealousy was limited generally to laudable rivalry for the attainment of fame, while today it has degenerated into a mortal strife for even the necessities of life. It has been estimated that it requires one thousand population to insure to a physician a decent living, yet in these United States the average is one physician to 700 or 800 population, and the number of yearly graduates goes on constantly increasing, thus forcing the overcrowding, in spite of the vacancies effected by death and other causes.

Happily, this disease seems, to a certain extent, to be self-limited. The medical institutions in their turn, feeling the baneful effects of excessive competition, have of late shown a tendency to amalgamate, which tendency ought to

be not only encouraged by the influence of a now well organized medical profession, but forcefully promoted by state, and even federal legislation. And this legislation can be obtained in due time if the appeal for it is firm, perseverent, unanimous, and, last but not least, explicit, I mean that in our petitions for legislation we should express exactly what we want, and all that we want. Weeding out all pretentious preambles such as, "to further elevate the level of the practice of medicine," "In view of the great benefit to accrue to the public," etc., etc. This verbiage is all cant, these benefits are incidental, but our opponents take advantage of this muddle of words to make confusion worse confounded, under the favor of which they manage to keep to themselves the kernel of the nut, leaving us only the shell. What we really want is effective protection against the various pretenders to the healing art. It is our due, and we need not be ashamed to claim it. In this also may be traced the origin of the multi-colored legislations that have sprung up, mushroom-like, in all the states of the Union, imprisoning the physician within one state, limiting his opportunities and aspirations, and robbing him of his ancient and dearly prized privilege of being every where welcomed as a citizen of the world.

Of so-called commercialism in medicine, I recognize but one instance worthy to be mentioned—advertising in its different forms, savoring of charlatanism, whereas the selling for profit of medical and surgical devices comes more properly under the head of graft, for the merchant takes his profit openly, as befits a recognized agent in the distribution of wealth. Other forms of graft are the accepting of percentages on prescriptions, and the dividing of surgical fees. The latter, indeed, has found defenders among physicians with reputation for integrity, but they forget that

the patient has to foot the bill (including, of course, the codicil). In my estimation, all that is clandestine ought to be shunned by the physician, for, if detected by his patrons, it will lose him their respect and their confidence forever. I am well aware that this rigidity of principle will keep the family physician in reduced circumstances, but such is the price he has to pay for the honor of his grey hairs.

And now I have come to a most important, but at the same time a very difficult subject. I mean underbidding, one of the direst effects of extreme competition and that which comes closest to real commercialism. Considered in the abstract, there is no price set upon health and life, and originally the disciples of Hippocrates received no stipulated fees, but only gifts, later called honoraries, in value more according to the means of the giver than to the extent of the services rendered. But in this iron age, when all is measured by the weight of the dollar, if our remuneration should be left to the discretion of our clients, and estimated according to their gratitude, our fate would be sad indeed. Hence, there is a necessity for setting a uniform price for certain specific services, formerly regulated by custom and tacit agreement, but latterly, by written agreement, determined in medical assemblies, and generally recognized by law. How it may be possible that intelligent men should adopt the silly policy of breaking such agreements in the hope of increasing their patronage has always been a mystery to me.

Suppose that in a community one physician cuts the fees by half, and that the others in self-defense, meet his reduction. He not only fails to secure the coveted increase in the number of clients, but has reduced by half the revenues of the whole profession in that locality, including himself, of course. And if they refuse to abase themselves and belittle

their services, he will lose the consideration of both the profession and the laity, for the latter will infallibly regard him in the same light that his brother physicians do. There are, indeed, some who endeavor to do these things in secret. These are the more despicable, but both belong to that class which, owing to some deficiency in skill or morals, either congenital or acquired, cannot otherwise obtain a decent livelihood. There is unfortunately no means of retaliating against these individuals; all we can do is to break all intercourse with them and leave them to hunt after their lost self-respect, if they ever possessed such a thing. Nevertheless, the influence of these pariahs of the profession is disastrous to its welfare and is the direct cause of the haggling over prices which is so humiliating to the finer instincts of the honorable physician.

In approaching the next item I am going to tread on sacred ground. There are several methods of treating the same disease which may achieve equal success. Of these, the costlier and more showy seem of late to have displaced the older ones with a majority of the profession; the conservative minority qualify these as fads, but I am afraid that the public puts a worse interpretation upon it, and attributes it to grab, if not altogether to graft. So at least has it come to my ears, and the same cutting remarks have been passed upon promiscuous surgery. On the other hand, the majority superciliously snub the conservative element, and characterize as foggy whoever does not step into the band wagon or at least does not bark closely behind. What do you think is the attitude of the public in this instance? Respect? Confidence? No! It is indeed immensely amused by the verdict of fogysm pronounced upon one party by the other, but it has a verdict of its own for the snubbers, one very well expressed in the following yarn: "Yes,

indeed," quoth the elder physician to his younger brother, "I have made mistakes in my time, one of which has robbed me of a cool thousand. An old codger, not over well dressed, consulted me about some ailment which I pooh-poohed as a little stomach ache, charging him \$2.00 for advice, when I subsequently found out that he was a miserly old millionaire, rich enough to have appendicitis." The moral is obvious.

As an antithesis to the costly treatment, may be set up the cheap contract practice, which, of all causes but one, has done the most to bring the medical profession in deep discredit, for it puts the wage-drawing physician about three pegs below the merchant, and hardly on a level with skilled labor. Do not wonder at hungry Esau selling his birth-right for a dish of lentils; he at least sold what was strictly his property, but the lodge physician is disposing of what is really the joint property of all the other physicians. He becomes the cat's paw of a few schemers, who under a certain patronizing air, feel for him only utter contempt, and if in retaliation his fellow practitioners imitate him to the best of their ability, what must ensue but the ruin of independent practice in that locality, and their subsequent enslavement? And they are unpitied, because nothing but the greed of the victims, their mean jealousies and moral cowardice could have forged the chains that bind them.

When the young maiden pours her confession in the ears of her spiritual director, she first delivers herself of her small fry, allowing him time to get hardened by a sort of seasoning process before she comes to her enormities. I have imitated her in keeping for the last what I call the pet sin of the profession; one which, in my opinion, has caused more harm than all the others put together, and as the first honors belong to the first of men, I shall begin

with the lights of the profession. The way some of them express their views about the obscure country practitioner, who in the innocence of his heart has sent a patient to his quondam tutor for comfort and advice, is sometimes shameful. I remember, when a student, I heard some sarcastic remarks about the diagnosis of a former pupil who had sent him a patient for treatment. My lack of appreciation of the joke was noticed and commented upon, to which I bluntly retorted that, "as the next boil might alight on my own neck, I might be excused if I felt a little glum by anticipation." The solemn medical assemblies, the text books, the current literature, are full of this spirit of criticism, coming from the high places to land on the shoulders of the general practitioner. But to abandon details, the specialist disparages the surgeon, and both the surgeon and the specialist disparage the family physician, exchanging also unkind comments upon each other's methods; with such edifying examples before their eyes, what do you think is the conduct of the common, every day practitioner? The merry show is not always conducted in plain words; a look, a gesture, an adroit reticence sometimes; a man may even be damned with fulsome praise and a scientific knocker is past master in all these methods. "What shall the harvest be?" The immortal Moliere shall answer you. The scene is a medical consultation in the parlor of a well-to-do bourgeois of Paris:

The Father—Gentlemen, my daughter is breathing harder! pray tell me quick the result of your consultation.

Dr. Tomes—Sir, we have argued thoroughly about the disease of your daughter and my personal opinion is that it proceeds from a great heat of the blood, so I advise that she be bled as soon as possible.

Dr. Desfonandres—As for me, I claim that her disease comes from a foulness

of humors produced by too great repletion, so I opine to administer to her an emetic.

Dr. Tomes—I hold that the emetic will kill her.

Dr. Desf.—And I, that the bleeding shall be the death of her.

Dr. Tomes—It becomes you well, indeed, to pose as a clever man.

Dr. Desf.—Indeed, it becomes me and you can't hold a candle to me for universal erudition.

Dr. Tomes—Remember the man who croaked in your hands last week.

Dr. Desf.—Bear in mind the lady that you sent to the happy hunting grounds only three days ago.

Dr. Tomes (to the father)—I have told you my advice.

Dr. Desf.—I have delivered to you my opinion.

Dr. Tomes—If you have not your daughter bled presently she is a dead girl. (Exit.)

Dr. Desf.—If you have her bled she will not be alive fifteen minutes after. (Exit.)

The temptation should not be yielded to to incise a psoas, hip or other "cold" abscess, except in isolated instances and then only under the most rigid asepsis. The production of a mixed infection means chronic sinus, chronic invalidism and, often, amyloid disease.

In the early months of pregnancy examinations should be made to determine that there is no retroversion or to treat it if it exists. A retroverted gravid uterus impacted in the curve of the sacrum always aborts.

Before operating for pharyngeal adenoids or hypertrophied tonsils make sure that these are not merely an expression of status lymphaticus. If they are, do not employ an anesthetic. Also determine whether the patient is hemophiliac. If he is do not operate at all.

When applying a plaster dressing to the leg always include the foot if the patient is to be confined to bed; otherwise "drop foot" will develop.

The Father (alone)—There, now! I am a deal more perplexed than before. By jove! I have a notion. I'll get her a bottle of Peruna. I have heard lots of people praise it.

Once more the moral is obvious—the patent medicine, the quack, faith cure and all the "isms" treading on the heels of our quarrels.

Thus discoursing about the old-time family physician and his envied prestige in comparison with the modern, and his greatly dimmed glory, we have found that, since many of the causes for the change lie in himself, he may hope by a thorough conversion, to recover his past lustre. Barring the acquisition of wealth, which modern competition has made impossible, except for the man of transcendent ability, he may by imitating the old physician's blameless life, his usefulness, his discretion, general knowledge, and disinterestedness, come again into his inheritance of respect, confidence and love, which after all, are the only rewards acceptable to the high-born soul.

In dealing with infections or injuries of the fingers amputation should be a *dernier resort*. This is especially the case with a thumb, the most important of all the fingers.

Surgical tuberculosis, no less than pulmonary tuberculosis, calls for the most careful general treatment, post-operative and otherwise.

Individuals with bluish sclerotics, and with dark lanugo over the upper part of the back are usually of tuberculosis diathesis; and these signs are not inconsequential in making a diagnosis.

In excising a varicocele under local anesthesia, tie the upper ligature first; the pain of tying the lower ligature will then be abolished.

When operating for empyema thoracis it is a good rule to aspirate again when the pleura is exposed and before it is incised. This may save some embarrassment.

RELATION BETWEEN ANEMIA AND EARLY STAGES OF TUBERCULOSIS, WITH REFERENCE TO TREATMENT BY HYPODERMIC MEDICATION*

B. R. SHURLY, M. D.

Detroit.

Until a specific is obtained, the life of the tuberculous individual depends on early diagnosis and early treatment. A vast number of those infected with the pulmonary form pass through a so-called pretubercular or latent period. There is no tuberculosis without the tubercle bacilli, yet if we postpone our most strenuous efforts until the microscope reveals the lesions, the fight is beyond us. It is the cases of latent unrecognized tuberculosis with their peculiar interference of proper cell metabolism that demand more of our attention. There is frequently a prolonged prodromal period of impaired general condition that is marked by a well observed disturbance of the usual ratio between the body weight in pounds and the height in feet. A progressive loss in weight follows. The external chest conditions, such as conformation, a limited expansion or capacity, may indicate the imperfect use of the pulmonary cells. The character of the pulse may give us additional evidence, such as acceleration with a relative decrease of arterial pressure. Lymphatism, with decidedly pathological tonsils, adenoids, and cervical glands, frequently exists. Will power replaces automatic power. Subjective symptoms become prominent—such as general malaise, failing digestion, weakness in the knees, and a slightly increased respiration. Where this prodromal period exists a varying degree of chloroanemia is frequently present. It is extremely marked in some cases, and the diagnosis is difficult in others.

The treatment of these anemias in associated or suspected tuberculosis is the direct subject of this paper. Medical literature provides us with many varieties of opinions upon the relations of chloroanemia and tuberculosis. It is agreed that so-called pretubercular conditions are generally attended by a diminution of haemoglobin and this is all out of proportion to the loss in red cells. Henocque characterizes tubercular chloroanemias by a diminished supply of oxyhaemoglobin. Incipient phthisis is usually marked by a slight leucocytosis, a slight reduction of red blood corpuscles, and a moderate fall in haemoglobin. Twenty-nine per cent, according to Laache, of tubercular chloroanemias in the early states show a diminished haemoglobin. Labbe regards chlorosis as a frequent first manifestation of a latent tuberculosis. Bramwell states that it is quite agreed that in families predisposed to tuberculosis, a stronger tendency to chlorosis exists. In his series of seventy-two cases of chlorosis, thirty per cent showed definitely a tubercular family history.

It is extremely important that we should thoroughly examine and seriously treat all initial evidence of a slumbering tuberculosis. A number of patients suffering from various forms of anemias, with or without lymphatism, have come under my observation during the last two years, who have been treated with hypodermic medication of iron, arsenic, lecithin, sodium glycerophosphate, iodine, or guaiacol, in such combinations as the indications seemed to demand.

Rynd, in 1845, published in the Dub-

*Read before the Delta County Medical Society, Dec. 14, 1906.

lin Medical Press, the first report of medication administered under the skin. In 1850 Pravaz invented his well-known syringe that brought the hypodermic method into more general use. During the succeeding years, until 1880, only morphine and atropine seem to have had general recognition among the profession throughout the world. Roussel, of Paris, took up the work and added many new medicaments adapted to the subcutaneous method. The Bulletins of the French Society report the use of hypodermics of arsenic in 1883; antipyrine in 1884; salicylate of iron, arseniate of strychnine in 1886, and cyanide of mercury in 1880. During the next decade numerous articles appeared in the French and Italian literature, and the treatment has been generally accepted for more than fifteen years as exceedingly valuable, especially where iron or arsenic is indicated. I am unable to find a single article written in English with details upon this treatment. The therapeutic nihilist of the deepest dye admits without argument that iron, arsenic, and phosphorus have a wide field of usefulness.

When these valuable drugs are introduced hypodermically into the body through the lymphatic or capillary blood systems, the effects are more pronounced, more rapid, and quite as permanent as when administered by mouth. We know that the 38-45 grains of iron that are found in the human body are for the most part in complex chemical combination with the haemoglobin. This haemoglobin, it was formerly claimed, required organic iron in its formation, and this idea prevails in the profession today, kindly and continuously nurtured by the enterprising firms who manufacture it in fancy forms. Whatever argument may be advanced in favor of organic iron by the stomach, I am confident that the ammoniated citrate or the arseniate of iron injected hypodermic-

ally in sufficient dosage will absolutely produce complete recovery from the pathologic blood conditions known as chlorosis, and that it will be found exceedingly efficient in many cases of secondary anemia. (See report of cases.)

It is estimated that the daily average of 100 milligrams or 1-6 grain of iron is required by the average individual, while many require only 6 milligrams per diem. It is generally conceded by physiological chemists that if inorganic iron is not rapidly assimilated it stimulates the iron producing function. It is therefore probable that the hypodermic method with the use of highly soluble forms of iron supplies directly both stimulation and iron to the deficient cells. Wherever iron is indicated, it may be given hypodermically in the form of the green ammoniated citrate or the arseniate of iron. Arsenic is best administered as Fowler's solution of the arseniate or the meta-arseniate of soda. These solutions may be combined, with or without the addition of glycono-phosphates of sodium or calcium. Strychnine also may be used in combination with advantage. A valuable formula in chlorosis is citrate of iron, 0.05 grams; meta arseniate of soda, 0.01 grams; glycono-phosphate of soda, 0.2 grams; strychnine sulphate, 0.001 grams.

The French glass, 30 minim syringe of Luer, with its needle of good caliber, is very useful in this treatment. It is easily sterilized with hot water and quite durable, and it is not subject to the corrosive action of the metals. A needle kept in a glass jar or box for each individual removes any danger of infection. The injections are made into the deep cellular or muscular tissues of the buttocks or back. The stronger iron solutions are slightly painful. Chloroform or ether may be applied to the site of the puncture, if necessary. A blood examination should be made at the com-

mencement and the completion of treatment. With a full dosage given daily an increase of ten per cent in haemoglobin can be expected each week.

The green ammonio-citrate of iron has been used in the arts in this country to some extent, but not medicinally. It can be introduced into the system without danger in doses from 3-4 of a grain or .05 of a gram to 11-2 grains, or .1 gram daily. It is extremely soluble in water and can readily be taken up by the lymphatics and capillaries. The solution for hypodermic use must be sterilized and supplied in hermetically sealed bulbs, each containing one dose for immediate use. The splendid Italian product is preserved in cherry laurel water and imported in small white glass bulbs. Any cloudiness in the solution can be detected easily. After the patient is prepared, the slender neck of the bulb is broken, the sterile needle of our sterilized syringe is thrust into the bulb, which bulb is turned bottom side uppermost. The liquid can be then quickly drawn into the syringe.

A full dose of iron by the hypodermic method shows a reaction in from five to twenty minutes. The superficial capillaries dilate and a feeling of tension in the head is noted. Tingling sensations in the hands and feet or over the entire body may be detected. The pulse accelerates, the face is flushed, and a general feeling of well-being supervenes. In susceptible individuals or when a considerable over-dose is given, a wave of nausea follows, which may persist as continuous nausea for some hours. More than one and a half grains at a dose usually produces sudden vomiting within twenty minutes. From two and a half to five grains may produce several attacks of vomiting with great prostration for some hours. Treatment in the proper manner obviates all possibility of disturbing digestion. The teeth are preserved and no constipation results.

We recognize fresh air and forced feeding as our two sheet anchors in the treatment of tuberculosis, yet how few of our consumptives today reach the later stages of that disease without a course of creosote or its compounds in doses that have impaired the entire digestive apparatus? The conditions of the stomach will decide frequently the prognosis of our case, and tonic or palliative treatment that can be introduced hypodermically preserves the digestive tract for its proper functions. Drugs that impair digestion should be avoided.

The therapy of iron and arsenic is too well known to occupy the time of this society in argument as to the usefulness of these remedies. It suffices to say that the results of hypodermic medication will speak for themselves, if you will make the trial in well indicated cases. In the treatment of anemias associated with early tuberculosis, we can remember that we need not fear a localized tuberculosis as long as fresh air, good food and reconstructives or tonics maintain a general nutrition that will preserve the cell resistance of the pulmonary gland tissues.

Conclusions.

First—This method affords a rapid, safe and certain therapy, especially where iron, arsenic, phosphorus, or iodine is indicated. It does not interfere with other plans of treatment by mouth.

Second—Chlorosis will respond rapidly to this method alone.

Third—We can avoid gastro-intestinal irritation, constipation, injury to the teeth, and imperfect assimilation.

Fourth—Drugs that impair digestion should be avoided in tubercular anemias.

Fifth—We are certain that the patient receives the medicine in the dosage we desire.

Sixth—The anemic patient is continuously under observation, as an average of thirty daily punctures is required,

and a definite diagnosis of suspected tuberculosis or other conditions can then be made.

Seventh—Solutions of iron introduced into the subcutaneous cellular tissue in over-doses of one and a half grains will produce nausea or vomiting within twenty minutes.

Eighth—The hypodermic use of iron and arsenic is a well established and successful method of treatment that deserves recognition in this country.

DISCUSSION.

Dr. H. J. Hartz, Detroit: The method as announced by Dr. Shurly is one requiring expert knowledge in its successful administration, and not easily carried out by the general practitioner. There are always certain dangers in the direct inoculation of drugs into the blood, and Dr. Hartz said that he would wish to avail himself of the screening action of the liver, in the administration of iron salts.

Dr. W. E. Coates, Manistee, confessed being a therapeutic nihilist. In regard to the efficacy of hypodermic medication he thought all workers in sanatoria were unanimous in the belief that medicinal methods were of very little use except in emergencies. Over-dosing is a frequent cause of impaired digestion. Dr. Coates questioned the use of the term chlorosis in this form of anemia. Chlorosis is probably a specific disease, although it may be associated with tuberculosis in its early stage. The usual anemia is a secondary change. He believes in fresh air treatment in all cases and thinks that just as much could have been accomplished for Dr. Shurly's patients by these means.

Dr. E. L. Shurly, Detroit, said that it is the great tendency of nature to heal disease, so that the results regarding any one method of treatment are apt to be fallacious. He had personally found the hypodermic method of medication a very valuable help in treating tuberculosis. He

had given a varied list of drugs in this way.

Dr. George Dock, Ann Arbor, said that the paper was interesting because it called attention to an exact method of treatment. He objected to the reintroduction of the discarded term "pre-tubercular," which means simply pre-sputum stage.

The tuberculous subject is very often anemic, this anemia frequently appearing before evidence of physical signs and sputum. There is a peculiar pallor about many of these patients. The hemoglobin may test 80 per cent when the patient looks quite as pale as a pernicious anemia patient with 30 per cent to 40 per cent hemoglobin. One must first make certain of the condition of the blood before drawing conclusions.

The anemia is usually secondary. It is very erroneous to consider the condition chlorosis.

The tuberculous patient may look pale and not need treatment for that condition. The cases with most marked anemia may not need iron. Fresh air and diet is usually sufficient. There is no doubt but that in certain cases iron is very useful. Taken internally it can be absorbed if given in the proper form.

The advantage of the hypodermic method is its accuracy and the chance for observation of the patient. There is no reason why iron should not be given in this way except that it is not necessary. Iron and arsenic can both be given satisfactorily by the mouth.

Dr. B. R. Shurly, Detroit, in closing said that the danger of infection was no greater than in giving morphine hypodermically.

The advantages were the more definite dosage and prevention of irritation to the stomach. Many preparations of iron are inert, and it is always a question of how much is absorbed, unless the preparation is quite fresh. Dr. Shurly has had a number of cases in his practice who could not take iron by mouth without upsetting the stomach. In these cases, where there is chlorosis, the hypodermic method of administering iron is very valuable, such cases improving rapidly under the treatment. Dr. Shurly would not do away with other methods of treatment. Hypodermic medication does not interfere with them.

HERNIA*

H. A. HAYNES, M. D.

Physician to the Michigan Reformatory, Ionia.

The subject of hernia is so very large that it is impossible to describe any of its many subdivisions in one paper, and although I submit Hernia as my subject, I intend to touch only upon that portion with which I have come in personal contact. My experience has been very limited, yet during hospital service, and during my term as physician at the Michigan Reformatory, I have had some opportunity to study daily a number of individual cases for extended periods of time, and it is my personal observation of these cases which I will present to you. I shall confine myself to the subject as I know it in penal practice, concerning its positive influence on the nervous system, especially in those who are mentally deficient.

In a table of percentages of the various kinds of hernia, Eccles gives inguinal hernia as 73.41 per cent. And of the twenty-five or more cases now under observation, there is only one other form of hernia—that one being a very slight umbilical hernia, which requires no support. There is about 5 per cent of the constant population of the Reformatory so afflicted, and at least 80 per cent of those have attempted one or more forms of cure, other than operation. The most common method is the truss. Its use is satisfactory in a large portion of the cases—but only as an aid to comfort and a safeguard against immediate protrusion; as a means to a cure it is of no value whatever. The next method which seems to have been tried in a large number of cases is by injection, used by many advertising (self-styled) "special-

ists." The method used by them is to inject a solution for the purpose of producing an inflammation about the ring, thus reducing its size and mechanically preventing the hernial protrusion. It is true that there are a few cures by this method, but it is a dangerous means, and should be discouraged in every case, thereby avoiding the occurrence of such a case as the following: This patient had submitted to injection on two different occasions, and when he came to me there was a distinct tumor over the right inguinal region. It was impossible to make a reduction, and an operation was advised. The operation disclosed the fact that the adhesions due to the injections had incorporated a portion of the bladder, and as these adhesions had contracted, they had drawn the bladder wall into the sac. In this mass of omentum, gut, and bladder tissue, bound down with adhesions into a solid mass, I began my dissection. After freeing the bowel, the task of breaking up the rest of the adhesions seemed easy, until it was discovered that there was bladder tissue incorporated in the adhesion-tumor caused by the injections. The bladder was opened in the effort to free it from the mass, and a repair had to be made before the other operation could be finished. The recovery was rapid, the cure perfect, and the patient became a strong man for the first time since the development of the hernia.

There is one other injection method which I will mention briefly, namely, with paraffin. Paraffin is combined with white vaseline in such proportion that

the melting point is slightly higher than the body temperature, about 104 degrees F. This mixture is thoroughly sterilized and injected into the tissue about the ring, thus forming an artificial obstruction to the hernial protrusion. After a time the paraffin mass becomes permeated with connective tissue cells. This is the only injection method which should be employed, but even this is now being discouraged by those who have used it most.

In contrast to these methods, which I would condemn, I will give a brief description of my favorite operation, that of Bassini, of course barring the variations which are bound to occur in nearly every individual case, especially those which have had injections used, or in long standing cases with many adhesions. The patient is prepared in every way as carefully as for a laparotomy; the intestinal tract thoroughly emptied; the parts shaved; a 1:10,000 bi-chloride dressing applied the night previous, thoroughly scrubbing at the time of operation; an alcohol, and then an ether sponge before the incision is begun.

An incision is made about one inch internal to, and parallel with Poupart's ligament, and two and a half to three inches long—(varying with the size of the hernia). The aponeurosis of the external oblique is separated in the direction of its fibers in such a manner as to leave at least half an inch margin between the outer edge of the incision in this structure and Poupart's ligament. The sac and cord are separated; the sac is cleared to a level with the transversalis fascia, emptied, opened, and the forefinger passed into the neck of the sac to prevent the return of the contents. An assistant encircles the neck with a catgut ligature, drawing it snugly upon the introduced finger as the latter is withdrawn. The ligature slips over the head of the finger and injury of the intestine is rendered impossible.

The sac is cut away. The cord is brought forward, while the internal oblique and transversalis are sutured to Poupart's ligament. The cord is now covered with the aponeurosis of the external oblique, and a new canal thus formed.

This operation is applicable to most of the cases and is superior to other operations, where the sphincterlike action of the arciform fibers has been destroyed by prolonged stretching or truss pressure, and in which the success of the operation must depend more on the closure of the canal through suturing and the subsequent development of adventitious tissue to maintain the closure than through typical restoration of the parts.

In case it becomes necessary to extend the incision to the level of the internal ring, in order to narrow the posterior wall, the deep epigastric artery and its accompanying veins must be ligated first. In this case, the cord, previously well freed, is placed in the gap thus formed. The internal abdominal ring is obliterated and the loose structures of the relaxed posterior wall of the canal are gathered up and through-and-through mattress sutures applied. The inguinal canal is closed as before. The skin is brought together with a running subcutaneous suture and the edge may be sealed with collodion or dressed with gauze, and adhesive strips bound over the site of the operation. It is well to keep the leg on that side slightly flexed.

So much for the various methods of cure. Now I wish to call your attention to facts I have observed concerning some of the mental conditions of the hernia cases under my observation.

Inmate T, aged 19, exceptionally well developed muscularly, ptosis of both eyes, left inguinal hernia, curvature of spine, a scar in right inguinal region which he claims was the result of an operation for strangulated hernia in 1902;

there is also an undescended testicle on the right side. He has served several jail sentences, and many short prison terms, has always posed as a pugilist, has abnormal sexual desires. During the seven months that elapsed before operation for hernia this man was in trouble continually. He was always vicious, surly and very irritable. No treatment during that time would change his condition. October 1st, 1904, he gave his consent to have the radical operation for the right hernia. On October 7, I operated, using the Bassini method; sac was very large, extending into the scrotum, containing a large mass of bowel and omentum. On reaching the neck of the sac, I discovered the undescended testicle, which I drew up through the neck of the sac and excised. The sac was tied off and the rest of the operation carried on in the usual way. He made a rapid recovery, and resumed work November 5. Since that time the man has been at work every day; has not been reported for any misconduct; his mental condition has been vastly improved; he is cheerful and is as contented as one could be under similar circumstances. This case had many abnormal factors, which you might say would work upon the mental state to make this man vicious, but I will quote another where history and physical examination revealed hernia as the only abnormality.

Inmate F, age 27, received here February 3rd, 1904, came with an excessively large right inguinal hernia, so large that no truss would confine it. Frequently this hernia would become strangulated and would remain so from two to ten hours. Owing to the inflammation that had been brought about by these repeated strangulations, he was urged to submit to the radical operation. To this he consented. He was put in bed and kept at rest for fifteen days. The mental condition from the

time of his being received here and up to the time of the operation on March 18, was fully as vicious as the case previously described, and further he displayed a disinclination to do any physical labor. The operation had no interesting variation from the ordinary Bassini procedure. The recovery was rapid, and he resumed work on the 7th of April. The mental conditions improved rapidly and he has had no trouble since that time. He has worked every day, and been a model prisoner. This case was of a man who is well educated, had never had any severe illness, and had held a good position up to the time of the occurrence of the hernia, but from that time he was in serious trouble.

Now, I do not mean to say that hernia is the cause of viciousness in every case, nor do I wish to have you understand me to say that hernia is the only cause of these mental conditions; but I do say that no man with a hernia can afford to allow it to exist, and that other abnormal conditions in this region, pressing on the same nerve filaments, such as varicocele, etc., should receive proper and immediate treatment. I also wish to state positively that where abnormal *tendencies* exist in an individual, and a hernia is present, there will be a rapid development of these criminal tendencies, and sooner or later they will find themselves in the reformatory or prison, and further, when they are so restrained, the vicious tendencies will become exaggerated, and, unless the radical cure is submitted to, they will be a constant danger to themselves and those around them.

It is patent to all that pressure is the cause of these abnormal mental conditions, that the pressure must be removed, that the truss will only tend to exaggerate the symptoms, that injection methods will never relieve such tendencies, as the pressure from the in-

flammatory tumor will continue; that, if you are sincere as to the welfare of the patient, you must perform the radical operation. Many a man, with these

conditions existing, becomes disagreeable at home and in his place of business (although he may have no criminal inclinations), and it is due to hernia.

PREGNANCY: DIAGNOSIS, HYGIENE, DELIVERY AND AFTER-TREATMENT.

FRANK A. WEAVER, M. D.

Charlotte.

The purport of this paper, as the title would indicate, will not be to dwell upon the function of ovulation and menstruation, of conception and generation—of the development of the foetus at the different stages of pregnancy, of malposition of the foetus within the uterus, and abnormal presentations of the foetus during labor, but will be to deal briefly with the subject of the pregnant woman in a normal condition.

Pregnancy is that function which is brought about by the union of the two sexes, the male and the female, in the act of copulation, whereby the semen, the male element of generation, comes in contact with the ovule, the female element of generation. The uterus is subject to very decided changes, from the time conception takes place until the pregnancy has terminated at full term. The uterus in the unimpregnated state measures in length about two and a half inches, and weighs about one ounce, while at the full term of a pregnancy the weight of the emptied uterus would be about one and a half pounds, and the length about twelve inches.

In the early months of pregnancy and while the uterus is still within the pelvis, the diagnosis of a pregnancy is made

with difficulty. We do not always have the nausea and vomiting which is so common with some women; we do not always have suppression of the menses in the early months of pregnancy. In fact, many of the most prominent symptoms may be wanting. Therefore, in this class of cases, unless the diagnosis is made by a vaginal examination and exploration of the vagina with the finger, coupled with changes observable in the mammary glands, and enlargement of the veins which course over the abdomen, the case may go on uninterruptedly without the discovery being made even by the woman herself, until about four and a half months, at which time the uterus rests above the brim of the pelvis, and the mother discovers her true condition from having observed unnatural movements, which are produced by a live foetus. On the other hand, the woman may have such well marked and troublesome symptoms that the diagnosis of her condition is made with the greatest of ease. She is often compelled to consult her physician to obtain relief from the reflex troublesome symptoms, which supervene at times. As soon as the diagnosis of the pregnancy is established and a doubt no longer ex-

ists, and the woman herself realizes her true condition, we then must consider the hygiene of the pregnant women and do all that is possible to assist her in carrying the child to full term. At this time we should impress upon her mind the necessity of properly clothing herself; the easy-fitting shoe should take the place of the high-heeled, tight-fitting shoe; waist bands should be loose and all the garments should be suspended from the shoulders; no garters or corsets should be worn. Perfect freedom must be allowed and she must be humored in every conceivable manner—her likes and dislikes should be gratified in so far as is possible, all craving for certain articles of food should be gratified, out-of-door exercise should be encouraged, either walking, or riding in an easy-riding vehicle. A pregnant woman may be allowed to attend to her household duties, providing that she avoids heavy lifting, sweeping of floors, making trips up and down stairs; in fact, any and all violent exercise must be avoided. As time wears on, and month after month passes, and the full term of gestation approaches, different symptoms will be noted in different women, not at all unnatural from the normal state of a pregnant woman. However, no set of symptoms can be outlined as governing all cases, whether normal or otherwise. Finally, as labor approaches, restlessness and abnormal uneasiness take hold upon the woman; pains may commence either gradually or abruptly; they may or may not be preceded by a lochial discharge; they gradually increase in severity and frequency, and the medical attendant is called in. In these days of trained assistants we are usually preceded by the trained nurse, who in these cases is a God-send to the physician; where the nurse can be had the physician upon his arrival finds his patient in a sanitary condition, all surroundings having been rendered as near

aseptic as is possible in this class of work. If there is no nurse, the physician will often find some wise old lady, whose whims he must humor as conditions indicate.

His first duty will be to ascertain the true condition of his patient by examination. If the labor be a normal one, he must determine at what stage the labor has advanced; if he finds her in the first stages of labor or the stage of dilatation, he must not be over-zealous to hasten nature's workings, but should direct his patient and attendants in their work. The labor is conducted best with the patient in the recumbent position, thighs flexed on abdomen, or the patient may lie on either side with thighs well flexed, which affords an excellent opportunity for the physician to assist in the final delivery of the child; it is occasionally advisable to have the patient placed on her knees, with the chest resting on the edge of the bed; I have often found this to be a very good position in the later stages of labor. After full dilatation has taken place, the physician should gently assist in dilating the soft parts and in lowering the head during each pain, giving chloroform in the last stages when indicated, to facilitate relaxation, to prevent lacerations, and to relieve the patient from the agonizing pains during the second stage of labor. In the third stage the expulsion of the afterbirth and contraction of the uterus occupy the attention of the physician; while the nurse is busily occupied in caring for the new born babe, after the third and last stage of labor, the physician should carefully examine and then cleanse his patient, repair any lacerations at once, after which insist upon perfect rest in the recumbent position and absolute cleanliness; in short, follow nature as closely as is possible and no accidents can occur. I do not use douches after confinement, except in unusual cases. Where discharges exist,

which cannot be stopped in any other way, I allow my patients to be lifted on to a vessel after the first day to void urine, or for a movement of the bowels; I have discarded the time-honored bedpan except in certain conditions where it seems necessary. In getting on the vessel, all pent up clots (and we invariably have them) pass off readily, and in a short space of time all offending ma-

terial is out of the way; the patient then passes through her puerperium to a complete recovery without a rise of temperature of one degree. Such are the rules governing my methods in obstetrics and I hope you will not think me egotistical when I say that I am proud of a record of 25 years of busy work in this line, with not a single death of a woman.

Opsonic Treatment of Surgical Diseases.—

A. P. OHLMACHER, Detroit, thinks that possibly Wright's comparatively simple theory of opsonins and its practical application have been rendered needlessly confusing to the average practitioner and gives his own experience with the use of bacterial vaccines, preferably autogenous, in various surgical conditions. While not neglecting to take the opsonic index when practicable, he was compelled to rely largely on the clinical manifestations as a guide to the repetition and size of dose, always endeavoring, of course, to give the injections at the right time, when the positive phase is beginning to fall and not in the negative phase. As Wright points out, the great causes of failure in previous tuberculin treatment was the giving of too large injections and too frequent repetition of the dose, causing a marked negative phase and keeping it up. Ohlmacher thinks that his results might have been better than they were had he been able to make more systematic opsonic determinations, which often show a fall of resistance before the symptoms indicate it. He has had remarkable success in various types of staphylococcus infections; obstinate cases of acne and furunculosis, impetigo, palmar abscess and in a very distressing case of what had been called psoriasis, but which he thinks was an extraordinary case of staphylococcic dermatitis, and which yielded rapidly to opsonic treatment with an autogenic culture of staphylococcus aureus. He had also very satisfactory results with a case of very annoying bladder infection from the colon bacillus, similarly treated after other treatment had failed. A very striking case was one of sacculated pneumococcus empyema, in which perfect recovery occurred in seven days after two injections following a small puncture. Ohlmacher believes that even the generally condemned method of aspiration would have been sufficient in this case when reinforced by opsonic

therapy. Owing to delay in obtaining Koch's tuberculin R., the standard vaccine for tuberculous cases, his experience with tuberculosis has as yet been limited, but he has been able to obtain a strain of gonococcus culture with which he has had striking success in the treatment of gonorrhea and its complications, including gonorrheal rheumatism and conjunctivitis. From what he has already seen, he is prepared to say that with proper artificial autoinoculation, we can obtain constitutional and local improvement in many subacute and chronic affections entirely beyond anything previously possible in medicine. He believes that we have in this method of bacterial inoculations therapeutic agents of a specificity and potency beyond anything heretofore employed in the treatment of disease, except, perhaps, the diphtheria antitoxin.—*Journal A. M. A.*, Feb. 16, 1907.

Rheumatism in Children.—J. ROSS SNYDER, Birmingham, Ala., questions the present tendency to widen the conception of rheumatism in childhood. He says that, eliminating scurvy, pyemic arthritis and the soreness and stiffness of muscles and joints from clothing, coddlings and bouncings, the cases of rheumatism in nurslings are almost *nil*, and from the eighth year onward an attack of rheumatism in a child resembles more or less closely the adult type. He gives a list of a number of conditions that have been regarded as occasional manifestations of rheumatism and some of these have in certain cases a connection that can not be denied. The most important of these are the cardiopathies, especially endocarditis, but in view of the number of infective processes that are capable of causing both arthritis and endocarditis, Snyder thinks preconceived notions as to the association of the two disorders will cause many mistakes in diagnosis. As regards chorea, tonsillitis and erythema nodosum, he is inclined to think the evidence as yet insufficient to prove their relations to rheumatism. As regards the many other conditions considered to be manifestations of child rheumatism, his opinion is that they will "one by one be taken away from this connection until rheumatism will come to mean not everything, but something or nothing."—*Journal A. M. A.*, February 9, 1907.

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MARCH

Editorial

Superstition plays an important part in the conception which the lay mind has of the practice of medicine. Just as chemistry is, in a great measure, the outgrowth of alchemy, and astronomy the outgrowth of astrology, so is the practice of medicine to some extent the outgrowth of magic and superstition. The interesting relations of faith, superstition and medicine have been set forth in a volume by Professor Magnus, recently translated by Doctor Salinger, of Philadelphia.*

Faith and superstition both originate in the feeling which every one has of the inadequacy of science to explain the ultimate origin of organic life. Faith is responsible for the sublimest ideals of the human mind; superstition is responsible for many false ideas; both are "children of the same family." In fact, in the earlier Greek philosophy, superstition and faith are inseparable, becoming divorced only when natural phenomena began to be interpreted by natural, rather than supernatural causes. Superstition then resulted as a reaction against scientific interpretation, and quite naturally therefore has played a most important part in the medicine of all ages. These medical superstitions have been vested with the

cloak of either religion, philosophy or natural science, often with all three simultaneously.

With the Greeks, theism and medicine were closely allied. The gods were responsible for the appearance of disease and were therefore in duty bound to expel it. Apollo invented the cure of disease, Aphrodite was in charge of the confinement bed, and Athena specialized in ophthalmology. The priests, being the intermediators between the gods and the people, naturally assumed many medical functions. Later, when the physico-mechanical theory of life became antagonistic to theism, the priesthood claimed for themselves the power to control nature. The priest gradually became physician, prophet and interpreter of dreams. This was true universally, among the Gauls, Britons, early Romans, Greeks, Medes and Persians. Cunning fellows, outside the priesthood, took up magic and sorcery and there soon developed a lay profession of miracle workers and charlatans under the name of magi.

Under the Roman emperors, the treatment of the sick by magic was quite universal. Hadrian, Antonius Pius and Marcus Aurelius were devoted believers in the power of magic, the latter relating that the gods in a dream had prescribed a remedy for the hemorrhagic cough and vertigo from which he was suffering. Under the later emperors decrees against magic treatment were issued.

Temple sleep, church sleep, medical saints and the cult of relics furnish many examples of medical superstition, founded upon religious ideas.

The various schools of philosophy which tried to explain the phenomena of nature and of life, naturally fostered many medical superstitions. By means of one or another nebulous theory, such schools of philosophy have been rampant in every age. The two notable examples to-day are the theories of Mother Eddy and of Elijah Dowie.

*Superstition in Medicine, by Prof. Hugo Magnus. Authorized and translated from the German, edited by Dr. Julius L. Salinger, late assistant professor of Clinical Medicine, Jefferson Medical College; physician to the Philadelphia General Hospital. Published by Funk & Wagnalls Co., New York and London, 1905.

The relation of medical superstition to natural science was first exemplified in the supposed influence of the heavenly planets upon human ills. This is proven by the Babylonian cuneiform tablets in the British museum which contain many illustrations as: "If the wind comes from the east upon appearance of the moon, disease will prevail during the month." The signs of the zodiac, as pictured in any medical almanac, survive to-day to remind us of the beliefs of centuries ago.

Many of the remedies employed by the ancients are familiar, such as: "Remedy against glaucoma. If the right eye become afflicted with glaucoma, rub it with the right of the wolf, and similarly, the left eye with the left eye of the wolf."

"Remedy against headache: Tie the rope of a hung criminal around the forehead."

The modern quack follows his ancient prototype, in that he employs the most sensational methods available. In place of the eye of the wolf and the hangman's rope, he uses, or pretends to use, the X-ray, the static machine, various electric lights, etc.



Medical Superstitions even of to-day are numerous. That they should still be encountered in the midst of a high civilization and an almost universal education illustrates how tenaciously the mysterious, no matter how nonsensical, clings in the minds of men. The writer has more than once been compelled to postpone operations until the phase of the moon became propitious. He has several times been asked to change the position of the furniture in a room so that the proper currents of electricity might pass from north to south over the bed and thus ensure the healing of a wound. Both of these superstitions can readily be traced to the ancient beliefs in the influence of the planets upon human ills. We are all familiar with

the horse chestnut cure for rheumatism, the blood of the toad as a cure for warts, and the angle worm therapy for anemia. The familiar magic belts, medicated chest protectors, and electric hair brushes, not to mention the worst of all fakes, the S. E. C. rings, sold by one Hyatt, of Detroit, at two dollars per ring, and so frequently worn that they are in evidence on almost any street car in Detroit (especially on the "three-cent lines") are foisted upon the public by the crafty, who well understand the hold which medical superstition has upon the credulous.

Certain sections of the country have their own medical superstitions. Such provincialisms are particularly noted in the southern states, although by no means lacking in the north. A recent paper by Hawkins,* on the "Magical Medical Practice in South Carolina," gives many interesting details of the practice known as "using," which has been handed down from father to son in a community, originally settled by Germans, who came, about the middle of the eighteenth century, from the Lower Palatinate, Baden, Wurtemberg and Switzerland.

Although these teutonic Carolinians are intelligent and educated, many of them still cling to the old beliefs in the laying on of hands and the recitation of certain rigamaroles, known only to the initiated "users." The latter are not numerous and therefore must travel about, being sent for in emergencies. The following examples cited by Hawkins, give an idea of this practice:

For Cataract: *I rub you with my right thumb, that you may move and depart. In the name of the Father and of the Son and of the Holy Ghost. Amen.* Rub it with the thumb from the nose outwards until you say the above words, blowing first three times. This must be done three

*Popular Science Monthly, February, 1907.

mornings and evenings, and every time, three times.

For a Burn or Scald: *The Holy Woman goeth out over the land; what carries she in her hand? A fire brand. Eat not in you, eat not around you. In the name of the Father, the Son, and the Holy Ghost. Amen.* Say these words three times, rub three times upward and downward, and blow three times—every time, three times.

Hawkins says: "The survival in the midst of a high civilization of these Carolina practises, allied as they are to practises and beliefs of almost primitive times, affords a pertinent illustration of the manner in which magical acts cling to life. * * * Their retreat, however, has been more rapid since science has begun to shed her rays into the dark places where such things hide themselves; and in proportion as this great light becomes more generally diffused, magic in medicine, as in all other departments of human thought, will fade and finally disappear."

It would be interesting to study the medical superstitions of the descendants of the Hollanders and of the French, here in Michigan.



The superstitions concerning maternal impression during gestation clings as tenaciously to many physicians as it does to the laity. In the present age of medical education, free though it is from the majority of the notions of our forefathers, it is surprising how certain superstitions survive,—a survival not of the fittest, but of the least fit; and the belief that certain birthmarks and deformities are produced by mental impressions of the mother after conception has withstood years of enlightened training and the strongest attacks of scientific testimony. The subject is never broached in a medical gathering that it does not provoke heated discussion; on the one side, clear, logical, scientific rea-

soning that absolutely disproves the mossy superstition, and on the other side passionate but empty allegations, supported by cited cases, which carry no iota of conviction. In even so learned a gathering as the pediatric section of the American Medical Association, at its last session, an excellent paper on the subject was opposed by the same fossil arguments, which in the light of logic appear nothing short of absurd.

Evidently, then, articles like this one by E. T. Shelly, M. D., on "Superstition in Teratology," appearing in the January 26th issue of the *Journal American Medical Association*, need as wide a circulation as possible, and also need attention called to them besides. It seems a pity, in this age of valid reasoning and meritorious skepticism, that the medical profession still contains so large a number of men who are impermeable to logic. It means an ignorance of embryology, and the physiology and pathology of pregnancy that speaks ill for their education. The day has come when we ought to put aside superstitions,—not only those entertained by the laity, which are gross and palpable, but also those cherished in the profession, which are often insidiously credible.



Instruction of the Public by Medical Schools.—"The faculty of the Harvard Medical School has voted to offer a course of free public lectures, to be given at the new medical school buildings, Longwood avenue, Boston, on Saturday evening and Sunday afternoons, beginning January 12, and ending May 12. Following is a list of the lecturers and their subjects:

Dr. Robert W. Lovett, "Unfavorable Conditions of Modern School Life." Dr. Edward H. Bradford, "Deformities of the Feet from Shoes." Dr. Robert W. Lovett, "Round Shoulders and Lateral Curvature." Dr. Edward H. Bradford, "Costume Deformities in Growing Children." Dr.

Harold C. Ernst, "Bacteria in Health and Disease." Dr. Charles Harrington, "Public Milk Supply." Dr. George W. Gay, "Under What Circumstances Should You Send for the Doctor?" Dr. Charles Harrington, "The Adulterations of Food and Drugs." Dr. Harold C. Ernst, "Bacteria in Health and Disease" (No. 2). Dr. Charles B. Macgrath, "How the Common Infectious Diseases Are Spread." Dr. Elbridge G. Cutler, "The Care of the Sickroom." Dr. Charles Harrington, "Public and Individual Water Supplies." Dr. Theobald Smith, "Antitoxins and Vaccines." Dr. Maurice H. Richardson, "What Surgery Can and Cannot Do." Dr. William T. Councilman, "Disease." Dr. Clarence J. Blake, "The Hygiene of the Ear." Dr. William T. Councilman, "Disease" (No. 2). Dr. Joel E. Golthwaite, "Facts About Rheumatism." Dr. Thomas Morgan Rotch, "Care of Healthy Infants and Prevention of Disease in Early Life." Dr. John Hildreth McCollom, "Some Points Concerning Nursing in Scarlet Fever and Measles." Dr. John Lovett Morse, "Tuberculosis in Early Life." Dr. Maynard Ladd, "Some Facts the Public Should Know Concerning the Feeding of Infants." Dr. Charles Hunter Dunn, "Significance, During Infancy and Early Life, of Disturbances of the Stomach and Bowels." Dr. Arthur K. Stone, "Some Phases of the Tuberculosis Problem." Dr. Theobald Smith, "Tuberculosis: Methods of Invasion and Dissemination." Dr. Harold C. Ernst, "Pulmonary Tuberculosis." Dr. Myles Standish, "Eyesight and School Life." Dr. J. Babst Blake, "Florence Nightingale and the Beginning of Surgical Nursing." Dr. Franklin W. White, "Food in Health and Disease." Dr. William T. Porter, "The Growth of Children." Dr. Franklin W. White, "Food in Health and Disease" (No. 2). Dr. Maurice V. Tyröde, "History of the Treatment of Disease." Dr. John T. Bowen, "The Care of the Skin." Dr. Samuel A. Hopkins, "The Hygiene of the Mouth and Teeth." Dr. James S. Stone, "The Physical and Mental Development of Children."—*The Harvard Bulletin*, January 9, 1907.

Speaking broadly, but still truthfully, the most important class of people practicing medicine are not physicians. This is because physicians are a hundred times and more out-numbered, because they are necessarily engaged mostly in curing or relieving disease, rather than in pre-

serving health, and because they never treat at all the larger part of the cases of disease even—that great class of so-called minor ails that collectively cause the major part of the physical suffering and disability of the human race. If the public are, and must continue to be, the most important class practicing medicine, it is desirable that medical schools instruct this class, indeed it may be said that directly or indirectly this is their chief duty.

We therefore regard with great satisfaction the action of the faculty of the Harvard school in offering the course of free public lectures as listed above. The subjects chosen show wise adaptation to the needs of the public; and each lecturer is an authority on his subject.

The public are in general superstition-ridden, advertisement-misguided, suffering, eager to learn, and as a class, the most important in medicine. But it is not the public only that will be benefited by such courses of lectures. Under our jury system of litigation, after exposition by judge and opposing attorneys, decisive authority is vested in a group of unprejudiced common laymen, not lawyers. More and more, momentous questions are finally decided, after full publicity, by the court of public opinion. So also in medicine, free publicity would tend to the same democratic, largely just, solution of opposing medical opinions, and the suppression of irregular, incomplete methods of practice.

We regard the initiation of systematic public instruction by the Harvard Medical School as prophetic of a new and much-needed function of all worthy medical schools. The medical school was first a place for students to be taught; comparatively recently it has become a place for teachers and students to learn—a place for research as well as for instruction; and now it promises to be a place for direct public instruction. We

earnestly hope for, and expect, the adoption of public instruction in our medical schools in Michigan.



The Committee of the Michigan State Medical Society, appointed to report on the **Patent Medicine Evil**, recognize that the evil is chiefly to the public, and that it is only this conception of its effects that justifies professional and legislative efforts to correct it.

Prominent among the causes that keep alive and encourage this evil are the abuses of advertising in the public press, lay and religious, and in some so-called medical journals, and the abuses of the business and advertising of drug stores and in the support given by some doctors. It is hoped to secure correction as far as possible by restriction of these abuses in medicine, corresponding in direction to what the pure food law has accomplished in the prevention of impure and unsafe foods. Protection for the public against unsafe medicines is even more necessary than for food, as the average citizen can better judge of impurities in food than of safety in medicine.

It is well known that a large number of prominent and influential papers, journals, and magazines have voluntarily refused to publish these pernicious advertisements. And there is reason to believe that properly directed efforts, with more enlightened public opinion, will cause their disappearance from all respectable journals.

It is the wish of this committee to have all reputable papers and journals of the state asked, directly or through their controlling associations, to co-operate in this reform movement by eliminating from their columns all advertisements of patent medicines that are manifestly untrue and misleading, and all "reading notices" and "guarantees," so called, which appear to be editorial endorsements and commendations of the medicines advertised, but which in fact are paid advertisements, and more dangerous because of their deceptive appearance. Many religious papers, so called, are especially culpable in advertising patent medicines and quack cure-alls, although some have greatly reformed in this respect.

Considering the boasted liberty—might we not say license—of the press and the credulity of the public, it is not strange that lay papers should print the misleading and dangerous advertisements to which they give so much space; but it is more than strange that religious journals should

give countenance and encouragement to such deceptive and harmful advertisements as are found in the columns of some of them. It is a hopeful sign that this abomination has never soiled the pages of some excellent religious journals. The average reader of a religious paper is disposed to accept—or at least has a right to expect—the appearance of an advertisement in its columns as in some sense an indorsement of the statements made, and of the merits of the article advertised, naturally assuming that such a paper could not advertise what its editors did not believe to be true.

Many ministers of the gospel do not approve such use or abuse of their denominational organs, and are keenly alive to the inconsistency between preaching and practice shown in the editorial and advertising columns, and are aware of the fact that not only is the influence of such papers belittled, but the preacher also is in a measure handicapped. Such ministers will be glad to see these shameful offenses to intelligent readers removed from papers for which they are expected to solicit support. And in the denominational conventions in which the business affairs are conducted they can do much to abate the wrong.

Druggists are required to pass examination in pharmacy before being licensed, and to know something of the drugs they handle, and how to put up physicians' prescriptions, the character and qualities of which may be known, and are recorded, protecting physician, druggist and patient alike. Yet the license of the druggist in no way qualifies or enables him to know anything about the secret patented medicine he sells. And, when he sells it, he in effect practices medicine. A man claiming to be a physician could not dispense the same thing, if disposed to, without a license as physician from state board and registration in county clerk's office. It is worse still, when the druggist lends his name to cunningly phrased advertisements of "guarantees" or doggerel which offend both rhyme and reason, and to others which strain the borders of propriety and decency as well as of truth and sense. All this calls for correction, and many druggists will be found ready to aid in abating a great discredit to pharmacy as it is too generally practiced.

Members of the legislature desire information upon all subjects which may come before them. The present pure food law enacted by last Congress, while containing some wholesome legisla-

tion pertaining to medicine, will need, in the opinion of well informed attorneys, supplementary action by state legislatures to protect the people against dangerous drugs made and sold in the same state. The law is found incomplete also in furnishing the protection intended against impure food, and the Governor in his message to the legislature has recommended supplemental legislation to secure the purpose of the original bill. This should make it easier to secure amendments relative to medicine.

The committee realize that the patent medicine evil is great, wide-spread, and of long standing. Individual or local or spasmodic efforts will accomplish but little. In order to secure uniformity of action and have the united co-operation of the profession of the entire state, the committee recommend that each County Society, by Auxiliary Committee, personal interview, printed circular, or such course as each Society deems best, take immediate measures to secure consideration of the various phases of this evil, and expression of opinion, and advice as to methods for its correction, from proprietors and editors of newspapers and public journals, druggists, ministers of churches, and members of the legislature in each county. The committee suggest to County Societies the advisability of holding at least one open meeting in the year—the winter is a good time—to which are invited editors, publishers, druggists, ministers, legislators, educators and other public-spirited citizens, together or in groups, to a friendly conference and discussion of the aforesaid evil and kindred topics in which all the public have a common interest.

Among the useful things county societies may do for the public the committee advise securing analyses of secret dangerous preparations. The committee do not advise efforts that could be construed as interference with legitimate business. The relations between medicine and pharmacy should be harmonious and mutually helpful. But the time seems auspicious, and the profession of medicine would appear delinquent not to co-operate in the general awakening in this Campaign of Education, of the profession as well as the laity. Let us reason together. The committee also recommend each County Society to procure for its members copies of circular reprints of papers on "The Patent Medicine Evil" that have been published in various lay and medical journals, for reading matter in office waiting rooms and for gratuitous distribution where they would do most good.

The committee would be glad to have suggestions at once that will aid in their work and that may be incorporated in recommendations to Committee on Legislation to which they will be referred.

THE COMMITTEE.



In two respects the medical profession deserves the grateful recognition and regard of all other callings in modern life. We have always insisted that the practice of medicine is a profession and not a trade. Trade is occupation for a livelihood; profession is occupation for service of the world. Trade is occupation for joy in the result; profession is occupation for joy in the process. Trade is occupation where anybody may enter; profession is occupation where only those who are prepared may enter. Trade is occupation taken up temporarily, until something better offers; profession is occupation with which one is identified for life. Trade makes one the rival of every other trade; profession makes one the co-operator with all his colleagues. Trade knows only the ethics of success; profession is bound by lasting ties of sacred honor.—President Faunce of Brown University.

The Young Women's Christian Association of Detroit have opened a Convalescent Home at 214 Harper avenue east "for women and girls of limited means, who, owing to the absence of acute diseases or the necessity of operative interference, are not readily admissible to the general hospital.

"There are two classes of patients for whom this home is especially intended. First, those who are obliged to leave the hospital to return to unhygienic surroundings before they have recovered strength sufficiently to resume their ordinary labors and thus lessen the benefits received in the hospital; second, the many women and girls not acutely ill who need rest, medical care and good food to prevent serious illness.

"A nominal charge will be made patients able to pay and all patients may remain under the care of their own physician.

"Patients will be received in the order of application; stay in the home being limited to two weeks, except under special circumstances."

Application for admission may be made by application blanks filled out by any registered physician, or directly to Dr. Florence Huson, Mrs. A. P. Brush, or Mrs. J. W. Finney.

Book Notices

Pulmonary Tuberculosis: Its Modern and Specialized Treatment.—By Albert Philip Francine, A. M. M. D., of the Staff of the Henry Phipps Institute, Philadelphia; Examining Physician to the White Haven Sanatorium; Instructor in Medicine and Physician to the Medical Dispensary of the University of Pennsylvania; Medical Registrar to the Philadelphia Hospital. J. B. Lippincott Co. 1906.

Doctor Francine is obviously exceedingly well qualified, from wide personal experience and an accurate knowledge of the methods employed by the most successful institutions and private practitioners, to discuss the treatment of this disease as at present carried out, and has prepared a book which should be very welcome to the general practitioner. It treats very fully the questions of fresh air, exercise, climate, diet, drugs and the management of symptoms, and is particularly clear in its instructions regarding those details of routine treatment on whose careful observance success so largely depends. Chapters of especial interest are those on climate, drugs, and symptoms. A treatise of this compass and purpose must necessarily dogmatize somewhat, and cannot be expected to devote much space to moot questions in pathology and therapeutics, such as milk infection, the value of the various sera, etc. The present status of Koch's tuberculin is, however, very well set forth. The author's style is clear, and the matter well arranged. There are signs in places of hurried writing and proof-reading.

Elements of the Science of Nutrition.—By Graham Lusk, Ph. D., M. A., F. R. S. Cloth. Pp. 326. Price, \$2.50 net. W. B. Saunders Co. 1906.

It has not been Doctor Lusk's aim in the preparation of this volume to present a text-book on diet and feeding, nor to discuss the chemistry and physiology of digestion. The book deals solely with the science of metabolism, on a knowledge of which any rational treatment of problems of nutrition must be based, and while in no sense a primer, it gives a very clear and satisfactory statement of our present knowledge of this complex subject, which has been considerably illuminated by researches completed during the past

few years. Beginning with an introductory chapter concerning the history of the science, the author proceeds to a discussion of the feces, their functions in excretion and the knowledge obtained from them. Following this are chapters on the metabolism in starvation, and the evidence it furnishes concerning the sources of bodily energy; on the regulation of temperature; on the fate of the different food principals in the body, the functions they serve, and their excretory products; on the constituents of a normal diet, in which is seen a tendency to approve of Chittenden's ideas; on metabolism in various pathologic processes; and a final chapter on the general theory. A volume of this kind seems to fill a very decided want, and a careful reading of it, in connection with such a book as the following should be of great assistance to the physician who wishes to bring his knowledge of digestion and nutrition down to date in order to handle intelligently cases in which these functions are disturbed.

Recent Advances in the Physiology of Digestion.—By Ernest Starling, M. D., F. R. S., Jodrell Professor of Physiology, University College, London. Pp. 156. Price, \$2.00 net. Chicago: W. T. Keener & Co. 1906.

This book comprises the ten Mercers' Company Lectures delivered in the Physiological Department of University College in 1905, and is intended to set forth the present state of knowledge of certain phases of this subject in which great advance has been made in recent years, and in particular of those problems concerning which research has been carried on at University College. The various digestive ferments and their mode of action are exhaustively and clearly treated of, and much comparatively new information regarding the laws of physical chemistry which affect them, is given. The new knowledge derived from the researches of Pawlow and others concerning the mechanism of secretion of the digestive juices, their properties, and the conditions that determine variations in them, as well as that concerning the movements of the alimentary tract, is related with a good deal of detail, and with an elimination of technical reports of researches which makes it readable and readily comprehensible. The book does not purport to

be a text-book on digestion, and presupposes a reasonable acquaintance with physiology and physiological chemistry; but given this, the physician who wishes his ideas on so vital a subject as clear and as recent as possible will find here much valuable information not readily to be obtained in such compact form elsewhere.

A Text-Book on the Practice of Gynecology.—For Practitioners and Students. By W. Easterly Ashton, M. D., LL. D., Professor of Gynecology in the Medico-Chirurgical College of Philadelphia. Third Edition, thoroughly revised. Octavo of 1096 pages, with 1057 original line drawings. Philadelphia and London: W. B. Saunders Company. 1906. Cloth, \$6.50 net. Half morocco, \$7.50 net.

The third edition of Ashton's Gynecology has just appeared, less than one year after the second. Its popularity is due, we think, to the fact that it goes into the minutiae of both medical and surgical treatment, more extensively than any book of which we know. It is not exhaustive in the sense of giving all the methods of treatment, for the author has rather confined his text to those methods which he deems best. These methods are then described in detail, the author leaving nothing to the imagination and allowing the reader to take nothing for granted.

The illustrations are abundant—unnecessarily so it would seem, for we can see no excuse for picturing, for example, a glass top table, a glass catheter, an alcohol lamp or a T bandage. It also seems somewhat childish to give space to group pictures of all the instruments required for each operation. A man who requires such an illustration has no right to be operating. However, the illustrations are for the most part good and they undoubtedly illustrate. They are less elaborate than those in many other works but are nevertheless instructive.

The book meets the requirements of the student and general practitioner, rather than those of the specialist.

The Harvey Lectures.—Delivered under the auspices of the Harvey Society of New York, 1905-06. Philadelphia and London: J. B. Lippincott Company. 1906.

The Harvey Society was organized in New York, in 1905, with the object of providing each year a series of lectures on scientific subjects related to medicine. The lectures have been

given for the most part on experimental medicine and have been by men eminent in their own special fields. The first series of thirteen lectures consists of: "The Theory of Narcosis," Prof. Hans Meyer; "Modern Problems of Metabolism," Prof. Carl von Noorden; "On Trypanosomes," Prof. S. G. Novy; "Autolysis," Dr. P. A. Levene; "A Critical Study of Serum Therapy," Prof. W. H. Park; "The Neurons," Prof. L. F. Barker; "Fatigue," Prof. F. S. Lee; "The Formation of Uric Acid," Prof. L. B. Mendel; "The Extent and Limitations of the Power to Regenerate in Man and Other Vertebrates," Prof. T. H. Morgan; "On the Nature and Cause of Old Age," Prof. C. S. Minot; "Modern Views Regarding Placentation," Prof. J. Clarence Webster; "Some Phases of Tuberculosis," Prof. Theobald Smith; "The Cause of Heart Beat," Prof. W. H. Howell.

The book consists, therefore, of thirteen valuable monographs. We hope that this volume will receive such support as will encourage the publication of the next series of lectures.

The Practitioner's Medical Dictionary.—An Illustrated Dictionary of Medicine and Allied Subjects, including all the Words and Phrases generally used in Medicine, with their Proper Pronunciation, Derivation and Definition. By George M. Gould, A. M., M. D., author of "An Illustrated Dictionary of Medicine, Biology and Allied Sciences," etc.; editor of "American Medicine." With 388 illustrations. Octavo; xvi + 1043 pages. Flexible leather, gilt edges, rounded corners, \$5.00; with thumb index, \$6.00 net. P. Blakiston's Son & Co., Philadelphia.

Gould is undoubtedly the foremost lexicographer in America and any dictionary prepared by him becomes instantly authoritative. The book is new in every way and is based on recent literature. Among other new features, it contains the terms of the Basle Anatomical Nomenclature about which we had something to say editorially a few months since.

The standards of pharmaceutical preparations as authorized by the eighth decennial revision of the United States Pharmacopœia are given.

Tables of signs and abbreviations used in general medicine and the specialties, and of the English and metric systems of weights and measures are introduced.

It has been made up in a form most suitable for ready reference, complete in text and illustration, and attractive in appearance. Printed on tough, thin paper, excessive weight and bulk are

eliminated, while the dull surface of the paper, together with the employment of new clear type, facilitate ease and comfort in reading. The book will lie perfectly flat at any page to which it may be opened.

The illustrations number 338, the pages xvi + 1043, thus exceeding any other work of claimed similar nature and scope.

Whitman's Orthopedic Surgery.—A Treatise on Orthopedic Surgery. By Royal Whitman, M. D., Instructor in Orthopedic Surgery in the College of Physicians and Surgeons, New York; Chief of Orthopedic Department in Vanderbilt Clinic, New York. Third edition, revised and enlarged. Octavo, 900 pages, with 554 illustrations, mostly original. Cloth, \$5.50 net. Lea Brothers & Co., Philadelphia and New York.

Orthopedic surgery has hitherto been commonly considered as the most technical of specialties, and as being limited to the hands of the few who could devise and understand the cumbrous apparatus identified with the name. Modern methods have brought a new dispensation to the numerous and universally distributed class of sufferers from mechanical defects in their own bodies. Chief among these advances is the fact that much of this suffering is preventable, and as much curable by attention early in life, when structures are plastic and treatment is both easier and more efficacious. Hence the family physician has become the most important of all orthopedists, for it is he who has the first opportunity, and who is thereby under the highest obligation, to detect, prevent or cure such defects, or to recognize when they must be referred to a specialist. Dr. Whitman's book presents orthopedic surgery exactly along these modern lines, and the demand for successive large editions shows appreciation of its value by the general practitioner as well as the surgeon and specialist. The author has improved the opportunity again presented by the popularity of this standard book by thoroughly revising it to the latest date and incorporating new material and many new illustrations. It is to be highly recommended.

BOOKS RECEIVED.

Text Book of Psychiatry. Mendel and Knauss, Philadelphia, F. A. Davis Company, 1907.

Pocket Medical Formulary. By E. I. Thorn-

ton, M. D. Eighth Edition. Philadelphia, Lea Brothers and Company, 1907.

A Study of the Human Blood Vessels. By Arthur V. Meigs, M. D. Philadelphia, J. B. Lippincott Company, 1907.

Diseases of the Lungs. By Robert Hall Babcock, M. D. New York City, D. Appleton and Company, 1907.

Starr on Nervous Diseases. By M. Allen Starr, M. D., LL. D. Philadelphia, Lea Brothers and Company, 1907.

Fraenkel Festschrift. Beging the December number of the Annals of Otology, Rhinology and Laryngology. H. W. Loeb, M. D., Editor. St. Louis.

A Text Book of Diseases of Women. By J. Clarence Webster, M. D. Philadelphia, W. B. Saunders Company, 1907.

A Text Book on the Pathogenic Bacteria. By Joseph McFarland, M. D. Philadelphia, W. B. Saunders Company, 1907.

A Text Book on Pharmacology. By Torold Sollman, M. D. Philadelphia, W. B. Saunders Company, 1907.

A Text Book of Pathology. By Alfred Stengel, M. D. Philadelphia, W. B. Saunders Company, 1907.

Transactions of the Maine Medical Association. 1906. By the Society, Portland, 1906.

Transactions of the Oklahoma State Medical Association. 1906. By the Society. Guthrie.

Cyclopedia of American Medical Biography.

Dr. H. A. Kelly, of Baltimore, is engaged in the preparation of a Cyclopedia of American Medical Biography to include the worthies who have passed away or have retired from practice in the United States and Canada. He wishes to give an account of the lives and writings of men who have contributed to American medicine. There are also to be included biographies of the men who have been especially prominent in their locality, even though they have not been widely known as writers or original contributors.

Collaborators have been selected for various portions of the country. Dr. Leartus Connor, of Detroit, has been wisely selected for Michigan, and he requests that any one having suitable material correspond with him concerning it.

**COMMITTEE ON THE STUDY AND PREVENTION OF TUBERCULOSIS.
OF THE MICHIGAN STATE MEDICAL SOCIETY.**

Bulletin No. 2. March 1, 1907.

To the Officers and Members of the County Medical Societies:—

The "Campaign against Tuberculosis," under the direction of the Committee on the Study and Prevention of Tuberculosis of the State Medical Society, needs the immediate and continued support of every officer and member of the county Medical Societies.

If your county society has not already appointed a Committee on the Study and Prevention of Tuberculosis for local work and to co-operate with the State Committee in accordance with the plan outlined in Bulletin No. 1, will you not interest yourself personally in the matter, see that early action is taken, the desired committee appointed, and the names of the committee members sent to the Chairman of the State Committee?

Pending the appointment of such special committees, the work of necessity must be carried on through the regular officers of each County Society to whom the State Committee will look for prompt and effective co-operation.

The secretary of every County Society is requested to call the attention of the officers and members to Bulletin No. 1 and succeeding Bulletins that, in so far as possible, the "Plan of Campaign" outlined in the Bulletins, may be inaugurated and carried out during the present year.

The Tuberculosis Census.

The first important work demanding immediate attention is the Tuberculosis Census, to be taken during the present month of March.

The County Committee or, if no committee exists, the secretary of the County Medical Society, is requested at the earliest possible date to notify the chairman of the State Committee, Dr. W. E. Coates, Onkama, as to the total number of doctors practicing in the jurisdiction of the County Society. The necessary number of circular letters with attached census blanks will then be forwarded for taking this census.

Each County Medical Society through its spe-

cial committee or secretary is requested to send a circular letter and blank to every practicing physician in the jurisdiction of the society. These blanks go to members and non-members alike.

The circular letter states the purpose of the census and requests that the annexed blank be filled out by the physician receiving it.

The census blank asks for the number of cases of all forms of tuberculosis under the doctor's care during the month of March, 1907, together with data giving the age, sex, occupation and form of disease. This data will be very valuable, showing as it will the extent of the disease in all parts of the state. It is to be hoped that every physician, county committee or secretary will give this census careful attention.

All blanks are to be filled out and returned March 31 to the local committee or secretary, who will forward same to the chairman of the State Committee; or the doctors reporting can report directly to the State Committee chairman.

County Committees or secretaries are particularly urged to get returns from every physician in their territories, also from all hospitals, public or private, county poor houses, jails, penitentiaries, asylums and other public institutions.

Necessary bills for postage incurred by County Medical Societies in sending out census blanks and letters will be met by the State Committee, but it is believed that where these bills are comparatively small the expense will be willingly met by the County Societies.

Use of Bulletins.

Reprints of Bulletin No. 1 and succeeding Bulletins will be furnished County Medical Societies or interested workers on application to the chairman of the State Committee.

It is particularly desired that County Medical Society members have their attention called to the Bulletins appearing in *THE JOURNAL*. Reprints are for distribution among interested members of literary, charitable, church or other societies co-operating with the County Medical Societies in anti-tuberculosis work. A good use could be made of the Bulletins by mailing or distributing

same among members of the profession not affiliated with our County Societies. This would mean some time, labor and expense for postage, but would be justified as a means to help bring members into our local and state societies.

Many doctors fail to join our County Societies for the reason that some societies are doing very little effective work. We should demonstrate that our County and State Societies are capable of earnest efforts and "are doing something" besides merely meeting and discussing a paper now and then—a judicious use of the Bulletins might help to create this feeling in the minds of many now outside.

Progress of Campaign.

The signs are not wanting that there is a progressive awakening of the Michigan medical profession to a renewed interest in the "Campaign Against Tuberculosis."

At the last meeting of the Board of Councilors of the Michigan State Medical Society, fifty dollars was appropriated for the use of the Committee on the Study and Prevention of Tuberculosis. This money will be used by the State Committee to defray necessary expenses for postage, printing, etc.

The comments made at the council meeting were all favorable to the work of the State Committee as outlined in Bulletin No. 1.

To successfully carry out the "Plan of Campaign," more money will be required, but if each County Society will co-operate by bearing the expense of sending out circular letters, bulletins, etc., to physicians in the County Society jurisdiction, much expense, time and labor will be saved the State Committee.

From Jackson County Medical Society, Dec. 6, 1906, comes news of a paper by Dr. H. J. Hartz, of Detroit, on "The Sanatorium Treatment of Tuberculosis."

Dr. J. N. McCormack's address, "Things About Doctors Which Doctors and Other People Ought to Know," published in THE JOURNAL for January, contained a brief but graphic statement of the tuberculosis problem in Michigan today—his equally striking admonition to the medical profession "to take up co-operative work with the other vocations" is in line with the present campaign.

The Detroit Medical Journal, January, 1907, publishes the Wayne County Society's "Tuberculosis Program" to which three meetings were devoted.

As a model that might be followed to advantage by other county societies, the program is herewith reprinted.

General Meeting—January 7.

The Relation of Boards of Health to the Restriction of Tuberculosis, Dr. C. G. Jennings. Discussion: Drs. Guy L. Kiefer, E. H. Hayward.

Sanatoria in the Treatment of Tuberculosis, Dr. Henry J. Hartz. Discussion: Drs. B. R. Shurly, Wadsworth Warren.

Medical Section—January 14.

Light in the Treatment of Tuberculous Conditions, Dr. H. R. Varney. Discussion: Drs. A. E. Carrier, P. M. Hickey.

Prophylaxis and Treatment of Incipient Pulmonary Tuberculosis, Dr. Stanley G. Miner. Discussion: Drs. E. A. Chapoton, W. S. Anderson.

Surgical Section—January 21.

Surgical Treatment of Tubercular Adenitis, Dr. T. A. McGraw. Discussion: Drs. Max Ballin, J. B. Kennedy.

Tuberculous Conditions of the Joints, Dr. D. LaFerte. Discussion: Drs. H. O. Walker, J. K. Gailey.

The Michigan Monthly Bulletin of Vital Statistics for December, 1906, reports 207 deaths from all forms of tuberculosis during the month of December, making a total of 2,676 deaths from this disease reported during 1906; 2,274 being due to pulmonary tuberculosis and 402 to other forms of tuberculosis.

The same issue contains a valuable article on "Some Problems in Sanitary Science," by Dr. Guy L. Kiefer, Health Officer, City of Detroit.

The article calls particular attention to the "Spitting Nuisance" as an important factor in spreading tuberculosis and pneumonia. Dr. Kiefer asserts that the result obtained through education whereby smallpox was forced to the bottom of the list of death-causing diseases "can and must be accomplished with tuberculosis and pneumonia." Bearing as it does on the cause and methods of prevention of diphtheria, typhoid and other communicable diseases as well, Dr. Kiefer's paper should be read by both the public and physicians.

The Michigan Monthly Bulletin of Vital Statistics together with other publications of our State Board of Health, should receive more attention from physicians, health officers and the public generally.

"Public Health," the quarterly publication of the State Board of Health, is designed especially for the information of laymen regarding the cause, methods of prevention and restriction of communicable diseases.

"Tuberculosis, Its Restriction and Prevention," is ably presented in the January-March, 1906, issue of "Public Health." Copies of this pamphlet may be obtained, without cost, by addressing the secretary of the State Board of Health, Lansing, Mich.

Every physician in the state might well be engaged in a little missionary work; keep reprints of the State Board of Health publications on the office table, see that patients receive copies of same, and by so doing help to "educate the public."

The public is anxious to be taught—'tis far better that the teaching comes from the pen of the medical profession rather than from quackery and patent medicine advertisements. The cause of quackery and the patent medicine evil lies in the aloofness of the average medical practitioner. Is it not time that this aloofness be cast aside, the public to receive its information from authoritative sources?

A step in the right direction is a pamphlet "Rules and Regulations of the Board of Health of the City of Ann Arbor, Mich."

This vest-pocket size booklet devotes eight pages to instruction regarding tuberculosis, directions to patients and their friends.

"Information for Persons Having Diseases of the Lungs and for Others Living in the Same House" is the title of a small booklet issued by the National Association for the Study and Prevention of Tuberculosis, 105 East 22nd Street, New York.

This booklet can be obtained at practically cost price from the publishers. County Medical Society Tuberculosis Committees could not make a better investment than a few dollars spent for this pamphlet. The information given is in simple language, but so plain that the ordinary lay reader can grasp the truth without danger of developing "phthiophobia."

The Ann Arbor Medical Club recently listened to a valuable talk on "Opsonins" by Dr. E. C. Bradley. The value of the estimation of the opsonic index in treating certain forms of tuberculosis by the inoculation of tuberculin was well brought out both in the paper and in the discus-

sion which followed by Drs. Dock, Vaughan and others.

Anyone interested in "Opsonins," bearing as they do on new phases of the tubercle bacilli and other bacteria and their modes of action in the animal body, should not fail to read this paper. The paper with the discussion is published in the "Physician and Surgeon," December, 1906, Ann Arbor and Detroit.

The active, aggressive "Campaign Against Tuberculosis" in the City of Grand Rapids, being carried on largely through the agency of the Grand Rapids Anti-tuberculosis Society, cannot be too highly commended. The Anti-tuberculosis Society is about half through with the campaign of co-operation with the churches, literary and other societies. The Grand Rapids daily papers are lending every assistance possible, abstracts of addresses are being published, all of which is helping to mold public opinion.

Dr. Alden Williams of the State Medical Society Tuberculosis Committee is taking an active part in the work. In one of his addresses, Dr. Williams called attention to the fact that the city had been generous enough to give \$25,000 for a smallpox hospital and could scarcely refuse to provide for patients suffering from a disease much more prevalent, once it became convinced of the need which exists, as shown by the fact that 130 deaths resulted from tuberculosis in Grand Rapids last year.

The Anti-tuberculosis Society has started a campaign to raise \$2,000 for the purpose of erecting shacks, continuance of district nurse visitation and the dissemination of educational propaganda. To carry out the work the following committee has been appointed: Dr. Alden Williams, George S. Boltwood, Dr. Collins Johnston, Cyrus E. Perkins, Samuel H. Ranck, Dr. T. M. Koon, John Ihlder, Dr. Ralph Spencer, Meyer S. May, Dr. William DeLano. Mr. C. N. Wright has been appointed by the society as its professional solicitor.

At the meeting of the Anti-tuberculosis Society, held Jan. 17, 1907, Dr. R. L. Kennedy, superintendent of the State Sanatorium at Howell, gave a short talk in which he predicted a very hopeful decrease of consumption if properly treated. He urged the providing of sanatoria.

The following resolution was adopted, "Resolved, that the Grand Rapids Anti-tuberculosis Society is heartily in favor of the establishment of a hospital by the City of Grand Rapids, and in the shortest possible time."

In a communication to the Board of Health, Dr. Ralph Apted, City Physician, asked the board to consider the feasibility of utilizing the smallpox hospital, now being built, for the temporary care of consumptives—temporary, because as soon as sufficient funds are forthcoming a hospital entirely for the use of consumptives will be built. Colonel Calkins of the Board of Health declares the building is merely a matter of time. It will be erected on the site now owned by the city next to the present smallpox hospital. It will not only take care of incipient cases, but will give attention to those which the sanatoria and the hospitals of the state refuse to accept.

The Kent County Medical Society is also actively engaged and will appoint a special committee on the Study and Prevention of Tuberculosis. At the meeting of the society held Feb. 6, Dr. William DeLano, City Health Officer, gave an address on "Management of Contagion from the Standpoint of Public Health." In this address the relation of the "Tuberculosis Problem" to public health was thoroughly discussed by the speaker, also by Drs. W. J. DuBois, Rowland Webb and Alden Williams.

Manistee County also reports active efforts in progress. Dr. W. E. Coates spoke before an audience of one hundred at the Manistee County Farmers' Institute held at Bear Lake, Jan. 16, 1907.

The speaker urged the necessity of the farmers taking up the problem of "Tuberculosis on the Farm." This address has already borne fruit as arrangements will be made for several papers at the next Farmers' Institute on the subjects, "Tuberculosis Among Cattle," "Tuberculosis in the Farmer's Family," etc.

The Onkama Heights Sanatorium Association, organized and conducted under the auspices of the Manistee County Medical Society for the purpose of establishing a sanatorium for the treatment of incipient and moderately advanced cases of tuberculosis and the dissemination of knowledge regarding the disease, is a practical outgrowth of the "Campaign Against Tuberculosis" carried on by the Manistee County Medical Society during the past year. The sanatorium, located at Onkama, Manistee County, Mich., is already in operation on a small scale.

It is the intention to raise at least \$2,000 to \$3,000 to be put into tents, cabins and equipment during the coming spring and summer.

The Traveling Teachers' Institute and Patrons'

Rally was addressed by Dr. W. E. Coates at Onkama, Feb. 14, Copemish, Feb. 15, and at Chief, Feb. 16.

Attention was called to the opportunities afforded the teachers of our schools in co-operating with the medical profession in combating tuberculosis, teaching the children the cause, methods of prevention and restriction of the disease.

Opportunities for Service.

The present session of the State Legislature affords opportunities for earnest efforts in the Anti-tuberculosis cause.

Governor Warner's message at the opening session called the attention of the Legislature to The Michigan State Sanatorium for Tuberculosis located at Howell, Livingston County.

The governor's recommendation, that the institution be granted a substantial appropriation for further equipment, buildings and maintenance, should receive the support of the united medical profession of the state.

The Committee on Legislation and Public Policy of the State and County Medical Societies should use all available means to put the needs of the State Sanatorium before the individual legislators and endeavor to secure an appropriation worthy of the state and the needs of the institution.

Dr. W. H. Morley, of Ann Arbor, introduced resolutions at the Jackson meeting calling attention to the menace of tuberculosis among dairy cattle, the present deficient laws for the protection of the public, and the necessity of so modifying present laws as to encourage the more general use of the tuberculin test by providing for a just compensation for cattle destroyed. Under present laws, the owner of a tuberculous dairy cow is allowed \$1.00 compensation where the animal is slaughtered by public authority. This meagre compensation puts a premium on concealment of the disease among dairy herds. The attention of the Committees on Legislation and Public Policy of the State and County Societies is respectfully called to Dr. Morley's resolution in the hope that early action will be taken to bring the matter before the present legislature. The importance of the menace of bovine tuberculosis has been recently emphasized through the report of the Royal Commission on Tuberculosis of England.

The report is considered to be one of the greatest importance as demonstrating conclusively that

the theory of Prof. Koch, "that bovine and human tuberculosis are quite distinct diseases," is based upon insufficient and misinterpreted observation.

To those conversant with the investigations carried on for years by our own national and state agricultural department workers, not to mention German, Danish, Swedish, and other European investigations, the conclusions of the British Royal Commission occasion no surprise or comment; they are but another link in the chain of evidence that "Bovine" and "Human" tuberculosis are primarily derived from the same species of bacillus tuberculosis, any difference existing between the two strains of the germ being due to slight biological changes resulting from adaptation of the germ to its environment.

For the Committee.

W. E. COATES, *Chairman*.

County Society News

BARRY.

The annual meeting of the Barry County Medical Society was held at the Court House in Hastings on Thursday, December 20, 1906. The annual election of officers resulted as follows: President, Dr. C. S. McIntyre, Woodland; first vice-president, Dr. J. W. Rigterink, Freeport; second vice-president, Dr. Swift, Middleville; secretary and treasurer, Dr. J. G. McGuffin, Hastings; member of board of supervisors, Dr. J. W. Elliott, Hickory Corners; delegate to State Medical Society, Dr. G. W. Lowry, Hastings; alternate, Dr. Gallagher, Dowling.

After the election of officers, Dr. Collins H. Johnson, of Grand Rapids, read a very instructive and interesting paper on "Heart Murmurs," and Dr. F. F. Shilling, of Nashville, read a paper on "Chronic Constipation." Dr. A. W. Crane, of Kalamazoo, gave an interesting talk on X-Ray examination of the stomach and bowels, which he illustrated with stereopticon views. After the reading of the papers a very keen discussion followed; many important points were brought out. A hearty vote of thanks was tendered the gentlemen who so kindly consented to prepare such excellent papers, after which the meeting adjourned to meet again in mid-summer.

J. G. MCGUFFIN, Sec.

BERRIEN.

The Berrien County Medical Society has elected the following officers for 1907: President, R. C. Allen, St. Joseph; vice-president, Zilph Walker, Benton Harbor; secretary, May Beers Lindenfeld, St. Joseph; treasurer, H. C. Hill, Benton Harbor.

M. B. LINDENFELD, *Sec'y*.

GRAND TRAVERSE.

At a recent meeting, Dr. L. F. Sipher read a paper on "Measles," an abstract of which follows:

Measles is an acute infectious and highly contagious disease characterized by symptoms of catarrhal involvement and a peculiar eruption. It occurs in spasmodic and epidemic form, the latter much more frequently, and oftener in the cold months of fall, winter and spring. The contagion is communicated chiefly through the breath and mucous secretions, and the disease may recur. The period of incubation lasts from 10 to 14 days and during this time the patient may exhibit no symptoms, or may be irritable and restless, with disturbed sleep and occasional cough and loose bowels.

The invasion is marked by cough and fever and by redness of the eyes and lachrymation, photophobia, sneezing and an irritating, watery discharge from the nose, which discharge soon becomes muco-purulent. These early symptoms of severe coryza last from 3 to 5 days, before the eruption appears. Moderately sore throat is frequently present, also headache, loss of appetite, and some glandular enlargement. The tongue is furred, white—and the papillæ red. Koplick's spots, peculiar to this infection, are important for early diagnosis. This sign appears 48 hours and even 3 to 4 days before the skin eruption, preceding the conjunctivitis and is present at first rise in the temperature. The spots appear on buccal mucous membranes, not on palate and fauces; are fully developed when the eruption appears and rapidly fade thereafter.

With the fourth day, the skin eruption usually appears—first upon the face, around ears, nose and mouth and then spreads to the trunk and entire body. It is usually most copious upon the face which is swollen, dark red in color, and closely set with papules which are elevated, rounded at the summits, and feel like soft velvet to the examining finger. The face lacks that white-

ness about the mouth which is so often seen in scarlet fever. The temperature rises to a considerable height on second and third day. With the "coming out" of the eruption it remains high and the general symptoms are more marked; the cough is a prominent and annoying symptom, which depends on the catarrhal inflammation of the entire respiratory tract. Usually these symptoms continue until the fifth or sixth day, when the eruption is completed and fades in order of its appearance, followed by a fine branny desquamation. The fever rapidly decreases, the catarrh diminishes and convalescence is established. Black measles is the name given to malignant forms, in which, owing to complications, particularly pneumonia, the skin is dusky red and the eruption comes out poorly and has a bluish color.

Koplick's spots are never observed in rubella, the fever is slight, coryza hardly noticeable, and the rash usually the first thing to attract attention. This is more rapid in its extension, is paler in color and often pin head in size. The whole eruption may fade in a day or two, and the temperature rarely exceeds 101°.

In scarlet fever the invasion is abrupt and the symptoms severe. The temperature runs up to 104° or 105°, with no sign of eruption. Koplick's spots are lacking and coryza is absent. The headache is marked and sore throat distressing and the rash is different in distribution and appearance.

Catarrhal symptoms are frequently seen with variola, and during the first 24 hours, the two eruptions are similar in appearance, but in a few hours more, the eruption in variola becomes beady and the papules have a distinct elevation. Besides this the active constitutional symptoms in variola abate as soon as the eruption appears.

Uncomplicated measles is a comparatively harmless disease, and we can give a good prognosis; complicated, its death rate is high. The early and extensive involvement of the respiratory system constitutes a source of great danger, especially in weak or badly nourished children. . . . Catarrhal affections of the eyes and ears, the former eventually purulent, are common. With the laity there is generally a great indifference in regard to the dangers of this disease, and too little attention is given to care of patients and the protection of others from infection. . . . How common a thing to hear of some chronic derangement in patients we are called upon to treat as dating from an attack of measles! Otorrhea, strumous ophthalmia, enlargement or suppuration

of cervical glands, chronic diarrhea, tabes mesenterica are all recognized as liable to follow in the wake of measles. Here also phthisis must not be forgotten. Among all the eruptive fevers there is none so prone to light up a latent dyscrasia as measles. An irregular temperature in a delicate child, occurring after the eruption has faded should be looked upon with grave suspicion, and frequent careful examinations of the chest should be made to detect the first evidences of breaking down of lung tissue. Physicians should make it their eager desire to make an early diagnosis and thereby aid in preventing others from being exposed, make visits frequently enough to detect complications early, and continue in touch with the patient long enough to be positive that no sequelæ develop. When the disease runs a benign course in a person otherwise healthy, there is very little need of treatment, except hygienic. . . . It is in cachectic individuals whose systems are debilitated, or when the natural course of the malady is modified or intensified by what are denominated complications that drugs are useful or necessary.

Our first effort should be a true diagnosis and then isolation as far as circumstances will permit. The patient should be kept in a well ventilated room of about 70°, the air slightly moist; direct strong light avoided. The patient is best protected from currents of air by keeping him in bed until a few days after the rash fades. The diet should be nourishing, easily digested, preferably liquid. If eruption is tardy—hot drinks and a hot bath may be beneficial. Tepid sponge baths will reduce too high temperature. Strict hygienic care of eyes, nose, and throat will do much in preventing complications. During desquamation the use of oil on the skin and warm baths are advantageous. Complications occurring should be treated the same as though occurring idiopathically.

Discussion.

Dr. Holdsworth: I should like to inquire what per cent of your cases of eye and ear diseases give a history dating back to an attack of measles. Personally, I do not find that given as a supposed cause as often as I would expect, and if any one has a case of measles this winter I would like to be shown "Koplick's spots."

Dr. Minor: I find that a good many mothers who bring children to be treated will say their eyes "got weak" after they had the measles; I couldn't mention the per cent.

Dr. Garner: How radically the treatment of measles has changed! I can remember when more than a certain amount of insipid water or some sort of "teas" was all a youngster could have to drink, and as for ventilation, why, it was out of the question. The wise grandmothers thought the respiratory troubles were not part of the disease, and every time the child sneezed or coughed another "comfort" was put upon the bed until the patient was really sick from vitiated air and too many "covers."

At the meeting on February 5, 1907, **Dr. Sara T. Chase** read a paper on "Massage," in part as follows:

The term now signifies a group of procedures done with the hands, such as friction, kneading, manipulations, rolling, and percussion of the external tissues of the body in a variety of ways, either with a curative, palliative, or hygienic object in view. It is impossible to find out the beginning of it—for historians record that massage has been practiced from most ancient times, both among savage and civilized nations, and this is not hard to account for, as almost any one, when seized with violent pain, instinctively and involuntarily seizes the painful part and attempts to relieve it by pressure or rubbing or both together. During my college days, Dr. Herdman was the only teacher who recommended this treatment, and it was nearly always in connection with electricity, so we could not estimate the relative value of each.

The use of massage has been abused by certain men and women who surround themselves with an air of mystery and profess to cure by virtue of their personal magnetism, or by powers given them by denizens of the spirit-world. Such "Doctors" and "Professors" guarantee to cure all manner of ills and their failures cause their patients to lose faith in manipulations and physicians to refrain from its practice. Massage is also used by Osteopaths who firmly deny any resemblance of their practice to its methods. They claim to cure all manner of disease by this method.

Massage not being in the curriculum in medical colleges is not familiar to general practitioners, hence its advantages for treating certain classes of disorders are not known. We must admit that to treat all manner of ills by this method alone, would take all a physician's time and strength, and would limit his practice to a very few patients a day—such a course would

not be practicing medicine. Its use is restricted mostly to hospitals and given over to nurses especially trained for its practice; but there are cases that need a simple form of manipulation which can be carried out by a member of their family under your direction, and there are cases which come to us that can be more quickly relieved by manipulations than by the use of drugs internally or externally. It is of such cases I wish to speak.

Mr. P. came to the office one evening with his face turned to one side, complaining that he had a sudden "stitch" in his neck and was unable to move his head. The muscles on the contracted side were kneaded from mastoid process to clavicle until relaxed. Then with one hand under the chin and the other under the occiput extension was made and the head turned in all normal directions. The head was forcibly turned to the opposite side so the muscles that had been contracted were stretched. One treatment relieved him and there was no recurrence.

Case 3. Mrs. L. came complaining of a severe ache and pain at the back of her neck about 7th cervical and 1st dorsal region. Had been some discomfort there for several months off and on, but now for several weeks, during which time she had been sewing, the pain had not left her night or day. She was given one treatment and had no return for nearly a year.

Case 6; June 1, 1906: I was called to see Mrs. F— who had been afflicted with sciatica since November. She was not able to lift the afflicted member so as to climb stairs and had lost much sleep because of pain, and was also troubled with twitching of the muscles about the hip. The lower back muscles were kneaded and muscles of the thigh and leg manipulated with a rolling motion. Then, while lying on one side, she was given the sidewise stretch to stretch the lumbar muscles. Then, while lying on her back, the thigh was flexed on chest and thigh abducted and adducted and the knee moved about in a circle to free circulation about the hip joint. The leg was extended and the foot flexed to stretch the sciatic nerve. This treatment was painful, and the patient made many complaints and felt sure she could not endure any more, but the effect was so favorable she sent for me again in a few days and continued for seven more treatments, when she felt she was able to assume the duties of her household. She was given eliminants, and hyoscyamine was added, which had a

good effect upon the twitching muscles. She still limps in her work, but has not been confined to the house with sciatica since the last of June.

Discussion.

Dr. Holdsworth: I should think in lumbago that would be excellent—and one sees so much of that this year. Do you find that acute sciatica yields to that treatment? It is a stubborn thing to treat. The nice thing about it you don't need any "machine," and you can relieve the patient at his home as well as at the office.

Dr. Chase: I have never had an acute case of sciatica to treat—during the febrile stage, etc. All mine have been in the chronic stage.

Dr. Garner: I must confess I feel guilty on this subject. I have so little experience in this method. I wish it were included in our college course. I believe such institutions at Battle Creek which have very elaborate outfits and whose results should speak for themselves, are proof enough of the value of this method. I believe some of the debilitated people who come to us could be helped by massage, for it certainly tones up muscles and improves circulation. Certain cases of neurasthenia who can not afford nurses, employ osteopathic practitioners, and that is why they are so popular. I believe that while the static machine has been abused, because of the misuse, that it will help neurasthenics and relieve pain.

Dr. Holdsworth: I had a case of wry neck that I had no results in treating. The patient stated that in a former attack a physician had given chloroform and forcibly replaced. Another physician cured the patient by a hypodermic of morphia plunged into the muscles.

Dr. O. E. Chase: These cases of chronic wry neck Dr. Hamilton of New York, treats by static electricity and suggestion. He uses the electricity, but says each time, "why, you are holding your head better," etc. I believe the acute cases can be relieved by massage.

Dr. Wilhelm: I have had no experience with the acute cases of the nature discussed, but I believe we resort to the principles of massage when we manipulate a "caked breast," or try to increase the flow of milk by this means, and then the friction after the tub bath in typhoid—and the inunctions in the treatment of syphilis!

Dr. O. E. Chase: We see osteopaths getting

cases among our best people, and it seems to me they are giving their indolent muscles exercise that their possessors are too lazy to take, thus improving their general condition.

At the meeting on February 5, Dr. Sara Chase was elected delegate, and Dr. E. B. Minor alternate to the Saginaw meeting.

M. M. CANAVAN, *Sec'y.*

HURON.

The Huron County Medical Society held its regular quarterly meeting January 14, at Bad Axe. There were 12 members present. Dr. D. Conboy read a paper on "Recent Studies in Blood;" Dr. W. J. Herrington described some interesting "Hospital Cases." After the meeting the members were entertained at supper by Dr. and Mrs. Herrington.

D. CONBOY, *Sec'y.*

RECENT STUDIES IN BLOOD.

D. Conboy, M. D.

The purpose of this paper is to give an abstract of the work done on the blood during the last 20 years.

In 1884, Metchnikoff published his studies on phagocytosis, or the part played by the large leucocytes in surrounding, engulfing and destroying the bacteria which invaded the organism. Then appeared evident the explanation of the five cardinal points of inflammation: Color, tumor, rubor, calor et functio lesa of the older pathologists; local inflammation became the manifestation of a red-hot battle royal by the lines of phagocytizing leucocytes drawn up in defense of the host against the invading infection. The invading micro-organisms were surrounded on all sides by a deep phalanx of leucocytes, which, breaking through the capillary walls by diapedesis, offered a barrier to the foreigners, and strove to confine the infection to the point of entrance.

Many dark and mysterious problems of pathology were thereby given a clear explanation. But, as might have been expected, for some years these explanations were carried too far; generalizations were too extensive. All systemic infections could not be explained so readily. For instance, in a body dead from anthrax the arteries

are filled with anthrax bacilli; even the capillaries are filled to bursting point. In this instance and in similar septicemias the phagocytes evidently fought hard but were overpowered. But, in a case which had succumbed to diphtheria no Klebs-Loeffler bacilli are found in the blood vessels. The phagocytes certainly made their defense in the pharynx, and the bacterial toxins passed through the lines of defense and poisoned the whole system. This organism died from toxemia. In cases of recovery from the toxemia there must have been something else in the tissues to counteract the toxins. This idea led Behring to produce in 1892 his antitoxin, which neutralized the toxins formed by the bacteria.

The wonderful effects of the diphtheria antitoxins and the efforts of medical investigators to introduce antitoxins for toxemias of other diseases switched the interest of the profession from the battling phagocytes to the toxins. In the course of a very few years great discoveries were made in the power of the serum to neutralize these bacterial products. A very complex system of protective substances was found to exist in blood serum. For convenience of explanation and discussion Ehrlich formed his celebrated side-chain, or side-link, theory, consisting of receptors, amboceptors, complements, haptophores and zymophores; agglutinins, precipitins, homolysins and bacteriolysins, etc. In the study of these toxins and antitoxins the phagocytes were almost forgotten, at any rate relegated to the place of a third or fourth rate power. From 1884 till about 1892 they were considered the principal factor in protection against infection; after the latter year the phagocytes were overshadowed by the interest taken in the curative properties of blood serum and its stimulation by injections of antitoxins and attempts to produce immunity through the employment of bacterial cultures.

Now phagocytosis has again come into the lime-light of medical attention through the work of Denys and Leclef of Paris, Wright and Douglas of London, Hektoen and Ruedinger of Chicago, and Prudden, Potter and others of New York. Denys and Leclef first discovered that, before the bacteria became ingested by the leucocytes, the bacteria were first rendered inert or probably killed by something in the serum; that the leucocytes themselves were unable to capture the bacteria until they had been made hors de combat by this unknown substance.

Douglas and Wright in 1903 coined the word "opsonin" to represent this unknown factor. This term is derived from the Latin *opsono*, "I prepare food for," which aptly represents the work of the opsonins, which prepare the bacteria for ingestion by the leucocytes. This bacteriolytic substance or opsonin is supposed to be a proteid, probably a globulin, that enters into chemical combination with the bacterial protoplasm and thus destroys it and renders the microorganism suitable for ingestion by the leucocytes by a process as yet unknown, whether chemical, mechanical or electrical. The opsonic power may be increased by a stimulus from without, as by vaccination or an injection of the bacterial culture product. Wright of London takes some of the bacteria from a sore in one of his patients afflicted with chronic furunculosis or acne, and makes a culture. He then grinds and kills the germs, which, with their toxins, he injects into the patient whence they were taken. This is followed for a short while by a reduced power of phagocytosis, termed the "negative phase," which is invariably succeeded by an increased stimulation called the "positive phase," that always improves the patient's condition and often brings about a complete cure. The immunizing vaccine may confer such a strong stimulus to the phagocytosis that the leucocytes may even attack the red blood corpuscles and devour them. This seems to be the cause of the anemia in typhoid and scarlet fever. In such cases the toxin in the blood acts as the stimulus to the opsonin, which sensitizes or prepares the erythrocytes for ingestion by the white corpuscle.

These processes are not mere supposition or theory; they can be studied *in vitro*, that is, prepared or produced in the test-tube and seen on the microscope slide. Improvement in patient can even be expressed mathematically. For instance, in the ordinary course of the disease, if under the microscope the average number of bacteria taken up in a phagocyte be two, and after an immunizing injection of the culture product the average number of ingested bacteria be four, then the opsonic power of the serum is doubled, and the opsonic index is indicated by 2. This is no rare occurrence, as the leucocytes can each contain 10, 20 or 40 bacteria; sometimes it becomes impossible to count the bacteria in the white blood cell, they are too numerous.

Another interesting fact is that phagocytosis is greater in an alkaline serum. Hence, we may

conclude that in a lingering case of typhoid the reduced diet may decrease the salt in the serum and thus injure the patient's chances of improvement; it should be furnished in the soups and other liquid dietary.

An instructive fact is brought to our notice in regard to the cause of the fever in the infectious diseases. A slight increase of heat enables the opsonins to sensitize the bacteria more easily. Fever, therefore, appears to be a protective provision of Nature to aid in the destruction of the poisoning bacteria. But if the heat rises to a too high temperature the opsonins are weakened and the phagocytosis is diminished.

We are now in a position to understand why in certain diseases, mainly suppurative, leucocytosis takes place. It is the more or less recruiting of the leucocytic defenders to combat the infective bacteria, and where the leucocytosis and the opsonic power of the serum are each doubled the patient's chances for recovery are quadrupled, supposing the invading bacteria remain numerically the same.

Just as the sensitizing power of the opsonin in the serum may be so increased as to enable the leucocytes to attack and destroy the red corpuscles by taking on malignant properties to the disadvantage of the patient, so too, on the other hand, the bacteria may be so virulent that the opsonin may have no power over them. The former, as has been suggested, may be the cause of the anemia in typhoid conditions; the latter tends to bring about the patient's early dissolution.

INGHAM.

The following letter has been sent to the physicians of Ingham County:

Lansing, Mich., Jan. 29, 1907.

Dear Doctor:—There can be no lagging in the medical profession of today. The command to "Keep up or get out," is ringing in our ears. This stimulus is pushing physicians to feel the need of a home Post Graduate Course. To meet this demand your Ingham County Medical Society is undertaking a series of clinical demonstrations in place of the usual program at the regular meetings, and we must have your personal help to make this course a success. The first of these will be held at our meeting in March, at which time lesions of the heart will be demonstrated, in charge of Dr. R. E. Miller. The second will

occur in May, when all forms of Tuberculosis will be considered, in charge of Dr. J. W. Hagadorn. The third will be held in September, when skin diseases will be presented, in charge of Dr. S. H. Culver. At these meetings there will be presented all the types of the diseases mentioned that can be procured. To that end the physicians in charge solicit the assistance of all physicians in the county who may have such cases. Arrangements will be made for appropriate care of patients while in the city.

Will all who have cases of lesions of the heart, who will be willing to appear before the Society, communicate at your earliest convenience with Dr. R. E. Miller, Lansing, stating the different types which you can secure, that he may arrange the clinic to the best advantage. Impress upon your patients that this will give them the advantage of a consultation of the best physicians of the county free of charge, and that their individual cases will be thoroughly discussed at that meeting.

Doctor, don't fail to help in this effort of your Society to keep the profession of Ingham county at the top. Bring with you your enthusiasm for this undertaking.

Faternally,

L. ANNA BALLARD, *Sec'y.*

ISABELLA.

The Isabella County Medical Society, at its annual meeting, February 6, 1907, elected the following officers: President, Dr. C. D. Pullen, Mt. Pleasant; Vice-President, Dr. H. V. Abbott, Shepherd; Secretary-Treasurer, Dr. C. M. Baskerville, Mt. Pleasant; delegate, Dr. P. E. Richmond; alternate, Dr. C. D. Pullen.

The Society adopted resolutions to make no old line life insurance examinations for less than \$5.00.

One new member, Dr. S. E. Gardner, of Mt. Pleasant, was admitted.

C. M. BASKERVILLE, *Sec'y.*

JACKSON.

At the annual meeting of the Jackson County Medical Society the following officers were elected: President, M. C. Strong; Vice-President, F. W. Rogers; Secretary, T. S. Langford; Treasurer, E. A. Martindale. The following commit-

tees have been appointed: Program and Scientific Work, C. H. Lewis, G. R. Pray and R. G. Hendrick; Public Health and Legislation, C. G. Parnall, D. E. Robinson and E. N. Palmer; Admission, A. J. Roberts, P. I. Edwards and V. D. Farmer; Entertainment, N. H. Williams, A. E. Bulson and E. A. Martindale.

The Post-graduate work, a program of which appeared last month, is attended by nearly all the registered physicians of Jackson. The discussions are fully participated in and the plan bids fair to do a great service for the medical fraternity, ethically and scientifically.

T. S. LANGFORD, *Sec'y.*

KALAMAZOO.

At the annual meeting of the Kalamazoo Academy of Medicine, Dr. W. A. Stone, Kalamazoo, was elected president, and Dr. G. T. Inch, Kalamazoo, secretary-treasurer.

G. T. INCH, *Sec'y.*

Kent.

Resume of paper "Adolescence," read by Dr. Ralph Spencer, together with points from discussion that followed, at Kent County Medical Society, January 23, 1907:

Dr. Spencer opened his paper with the following quotation: "One might parody life as a stream from high mountain ranges, which coursing down through all the manifold ways from the mountain tops goes on to the sea of Eternity. Adolescence is the chief rapids in this river of Life which may cut a deep canyon and leave its shores a desert." Educational methods are like the engineer who builds a series of well devised dams to irrigate wide areas, or turn the mills of Life, so that the floods may be stored up against drought so that nothing is lost. Seepage is the waste of licensed vice. Youthful dissipation is the wreckage of a spring freshlet which wears away the dam, and makes deep gullies. The prolongation of old age, by all the methods of modern hygiene is a system of dikes which economizes waste, and finds its analogy in the ability to live out ones expectancy of years.

At about 12½ years there is a sudden increase of illness, due to impending development of adolescence. Before puberty, scrofulous and adenoid diseases are most common, and after it anemia, nervous headaches, tempermental dis-

tortions, eye diseases, etc. The present generation of young girls is weakly, anemic and nervous to an extraordinary degree. The forcing process is causing an appalling amount of invalidism. From thirteen to fifteen years great reduction in school work for both sexes, but chiefly for boys, should be insisted upon. Considering the morbid condition of adolescence, the most prominent are indigestion, disorders of the alimentary canal and especially the stomach, the rapid bone growth requires more lime, the blood needs iron and oxygen, more fats for heat, the brain more phosphorus. Sleep is to feed and build up the nerve cells which are worn away by activity. What we call hunger is the unconscious desire of every cell for the food it needs. Adolescent youth has more energy than he can expend and is subject to explosions of deportment, it is the age that hates nothing more than restraint, loves nothing better than abandon. Emphasizing this and one of the very saddest of all the aspects of human weakness and sin is onanism or self-abuse among the adolescent. Until recently, it has been met on the one hand with either prudery and painstaking reticence or treated in terms of exaggerated horror as in the "Scare" or quack doctor literature. It still requires a great degree of moral earnestness to discuss it with candor and the requisite plainness. A father should understand this to know how to control and when to advise his boy; a mother should be informed so that she may guide her daughter safely through this period. The struggle between what is felt to be right and the lusts of the flesh is always hard for sanity. Add to this, in youth, the fear inspiring quack advice and pernicious literature and you have the most pitiful of all victims.

"Lancaster" found a single New York broker who had for sale 3,000,000 confidential letters written to advertising medicine companies and doctors, mostly by youth with their hearts' blood, and under assurance of secrecy. Pathologic adolescence seems to have as causative factors anything leading toward forced civilization and away from Nature. Best treatment seems to be covered by any management tending toward more simple life and assisting on normal body growth. Delayed adolescence fortells a brighter future than early precocity.

Physicians understanding adolescent peculiarities should explain to parents and plead for more sympathy and better guidance for awkward and erring youth.

Abstract of paper read January 9, 1907, by Dr. Collins Johnston, Grand Rapids:

Organic murmurs are due to defects in the cardiac orifices or valves. Functional or accidental murmurs are not due to definite pathological conditions. Organic murmurs are usually constant but may be at times scarcely audible or altogether disappear. It is not uncommon, for instance, to find a presystolic murmur in mitral stenosis present one day and absent the next. Also in the aortic regurgitation when the heart is weak, the murmur may be inaudible only to return when the heart's power is regained.

In the examination of patients, when uncertain as to the presence of a murmur, we should always have the patient jump about a few moments to bring out a murmur which otherwise we may be unable to hear.

It is not possible to cause a development of a murmur in a perfectly normal heart by such a test. The murmurs of stenoses as a rule are better heard in an erect position, while those of regurgitation are better heard with the patient lying down. There are so many exceptions to this rule, however, that patients should be examined sitting, standing, and reclining.

As a rule murmurs are loudest at the area where they are generated. There are many exceptions to this rule, however. Mitral systolic murmurs, for instance, are sometimes much more audible above and to the inner or outer side of the nipple, than directly over the apex. It is often so difficult to differentiate between organic and functional sounds that it is unwise to rely upon murmurs for a diagnosis to the exclusion of other physical signs. Osler says that only an expert should make a diagnosis of a heart disease from a murmur alone. Functional murmurs are most frequently in the pulmonic area. They are almost always systolic. If the patient has no history of rheumatism or other acute infections, or is neurotic, or anemic, or has digestive disturbances, or vicious habits, or is addicted to sexual excesses, coffee, tobacco, excessive eating or drinking, we have some reason for thinking the sound is non-organic.

Functional murmurs may lead to hypertrophy of the heart and accentuation of the pulmonary second sound, but are usually unaccompanied by recumbent position.

In a considerable portion of cases a definite opinion should be reserved until two or more

examinations have been made. Unless one is an expert, palpation and percussion are often of more value in diagnosing heart disease than auscultation. In aortic disease the pulse is usually slow and regular. In mitral disease, myocarditis, tobacco and other habits, and in functional disturbances it is often irregular.

An irregular or an intermittent pulse does not necessarily mean organic disease. But if the pulse is *both* irregular and intermittent it usually indicates disease of the muscles or valves. All thin-chested persons, all young children, anybody after great exertion, any child with a little fever, may have a systolic murmur in the second left intercostal space. It is an every-day affair. A systolic murmur at the aortic area *may* mean an aortic stenosis but organic stenosis is exceedingly rare.

A diastolic murmur of aortic insufficiency is one of Osler's truthful murmurs, the other being a presystolic murmur of mitral stenosis.

ALDEN WILLIAMS,
Secretary.

MANISTEE.

Dr. W. E. Coates, of Onekama, chairman of the Tuberculosis Committee of the Michigan State Medical Society, gave a short talk on "Tuberculosis" before the Manistee County Farmers' Institute at Bear Lake, January 16th, 1907.

Attention was called to the following points:

One out of every six deaths among human beings is due to tuberculosis; 200,000 lives are lost annually in the United States from this cause; according to some authorities at least 50 per cent of mankind before reaching the age of 45 years have tuberculosis or have had it and recovered.

Tuberculosis in cattle bears an intimate relation to tuberculosis in man—we must begin the fight against the disease on the farm. Twenty-five per cent of human tuberculosis, especially among children, in the speaker's opinion, is due to an infected milk supply. Behring, an eminent German authority, claims that all cases of human tuberculosis are due to infection from milk during infancy. Medical authorities are not prepared to accept Behring's sweeping claim, but recognize the danger of milk infection.

The frequency of tuberculosis among cattle can be judged by reports from national and state experiment stations which show that approximately

1 to 2 per cent of range cattle are infected, 10 per cent of the average dairy cattle the country over have the disease, while among high bred stock the percentage runs from 50 to 90 per cent or fully 80 per cent on the average. Observation of infected cows has shown that sooner or later from 2 to 15 per cent of them will yield milk containing living tubercle bacilli, even in the absence of primary infection of the mammary glands. The "Tuberculin Test" should be more generally used; it offers a safe and effective means of diagnosis; the percentage of error in trained hands is not over 5 per cent. Where doubt exists as to the accuracy of the test, another test in three to six months will help decide. On general principles, every dairy herd should be tested at intervals of six months.

As an illustration of existing conditions, the history of an infected herd of 40 shorthorn Durham cattle in Manistee County was given by the speaker. The history, obtained from Dr. Magnus Nelson, of Manistee, covered a period of nine years, during which time numerous deaths occurred, until finally, 22 head remaining of the herd, and its offspring were slaughtered for tuberculosis.

The "Plan of Campaign Against Tuberculosis" by the Michigan State Medical Society was outlined, together with the opportunities afforded by the Farmers' Institutes of the State to take up the problem of tuberculosis on the farm; to teach the methods of recognition of tuberculosis in cattle; also the means of prevention and restriction of the disease among not only the farmer's herds, but his family as well.

The resolution of Dr. W. H. Morley, of Ann Arbor, at the Jackson meeting of the State Medical Society, directing attention to the present unjust law allowing a farmer only \$1 for a tubercular animal condemned and killed by public authorities, was mentioned, and the hope expressed that the farmers would join with the State Medical Society in securing better and more just legislation to help eradicate the disease among the herds of the State.

The co-operation of the Manistee County Farmers' Institute in the work of the State Medical Society was asked for and a cordial promise given that at the next meeting "Tuberculosis On the Farm" would be given a prominent place on the program.

MONTCALM.

The Montcalm County Medical Society met at

Stanton, January 10, 1907. The weather being very unfavorable, there were but ten members present.

Dr. D. K. Black, of Greenville, was elected delegate, and Dr. James Purdon, alternate, to the Saginaw meeting.

Some of the business of the society was postponed until the next meeting, which will be held in Greenville, on the second Thursday of April.

H. L. BOWER, Sec'y.

OSCEOLA-LAKE.

The Osceola-Lake County Medical Society held its annual meeting at the National Hotel, Reed City, January 16, 1907.

The following officers were elected: President, Dr. Thomas F. Bray, Reed City; vice-president, Dr. U. D. Barr, Le Roy; secretary and treasurer, Dr. D. S. Fleischhauer, Reed City; delegate, Dr. E. L. Heysett, Baldwin; alternate, Dr. G. T. Fields, Chase.

D. S. FLEISCHHAUER,
Secretary.

OTTAWA.

At the December meeting, the following paper was read:

PNEUMONIA—ITS IMPORTANCE AND TREATMENT

T. G. HUIZENGA,
Zeeland

Pneumonia is an infectious inflammation of the lungs due to a specific organism, the micrococcus pneumoniae, which produces a potent poison affecting the whole system and very often results in death. It is impossible to do justice to so vast and important a subject in one paper and we shall therefore consider only two or three phases which have a practical bearing on the subject.

First we desire to impress you with the importance of this subject. For this purpose allow us to refer to our vital statistics from which we gain some very important information. They tell us, for example, that in former years pneumonia was third, then second, and now is first, as the greatest single cause of death in Michigan, and this is true of other localities as well. The sta-

Statistics for Michigan show that during a period of six years there were reported 15,111 deaths from pneumonia and 13,470 deaths from tuberculosis. The deaths due to pneumonia equal those due to meningitis, typhoid fever, diphtheria, whooping cough, scarlet fever, measles, and small-pox combined in Michigan. Since 1860 there has been a steady increase in the number of deaths caused by pneumonia. In 1860 the deaths per 10,000 were 4.40, in 1900 19.78. Dr. A. R. Reynolds, Commissioner of Health in Chicago, states that since 1900 pneumonia has claimed 40 per cent of deaths more than all other contagious and infectious diseases combined. Some contend that the increase is due to results or complications following influenza; but remember that this increase dates back to the beginning of the records in 1860, while influenza has been with us only since 1890; and note in particular this—that during the last five decades we have become better acquainted with this disease, and can treat it more skillfully, that our materia medica has improved decidedly, that our methods for prevention must have had some bearing on this disease, but that in spite of all this, pneumonia moves steadily on at an increasing rate, claiming its victims by the thousands and raising its death rate of 4.40 to 19.78 per 10,000.

The foregoing should impress us deeply enough with the dangerous character of pneumonia, to move us to action in the study and treatment of it with more skill and in the prevention of its occurrence wherever possible.

The second phase that we wish to mention is that of the principles underlying the treatment of pneumonia—we say principles because no definite, absolute rule can be laid down for the treatment of this disease. We can not treat all cases alike; each case must be treated in accordance with its individual needs and characteristics. The first general principle in the treatment of pneumonia is to antidote or neutralize the infection that has taken place. Can this be accomplished? No, we have no specific like quinine for malaria or antitoxin for diphtheria; serums are in the experimental stage, and nothing definite has been accomplished. What then are we to do? Here, as in most cases of this nature, we should make a definite, though moderate, attempt to eliminate the infection from the system, which can be done by making use of the skin, kidneys, and especially bowels, by the free use of water and salines. Since we have no specific we must do the next best thing and that is to modify the results of the in-

fection viz., chill, temperature, inflammation, and the resulting complications as they may arise.

The period of chill can be shortened by the free use of hot water internally and hot water bags externally. Temperature may be modified by the proper use of Tr. Aconite and Veratrum Vir., but their use should not be long continued. The remedy *par excellence* is the cold pack or ice bag to the affected side and the cold sponge bath for general purposes. The use of the cold applications has given better results in my experience than all other remedies combined. Liquid guaiacol, in doses of from 5 to 20 drops, applied to the chest and covered with oiled silk may help to bring down the temperature when all other remedies fail.

The inflammatory condition is treated by the use of cups, blood letting, blisters, cotton batting jackets, and various forms of poultices, but here as in the case of the temperature, I have found that the judicious use of cold answers the purpose better than all else. And in connection with it, use what Prof. A. B. Palmer valued very highly, viz., large doses of quinine and morphine. This will eliminate any malarial complication and allay pain and cough as well as be beneficial to the inflammatory condition itself. While this treatment is carried out we should at the same time fortify our patient with a good nourishing diet, sufficient light, and fresh air.

One of the most frequent causes of death is heart failure undoubtedly due to high temperature, overworking of the right heart, and especially to the toxemia produced by the specific organism. How necessary therefore that we should be watchful in regard to this condition and use in advance such remedies as strychnine and digitalis, for here as elsewhere the "ounce of prevention" or forethought may guide you safely past the dangerous period. In a disease where heart failure is so often the cause of death, we should not wait until we meet it face to face, but we should arm ourselves and fortify the patient against the serious danger. Complications should be treated as they arise and on their own merits.

We trust enough has been said to give us a good working basis to go into the sickroom with such confidence as will inspire the patients with a life-giving hope, and to renew our interest in this important and dangerous disease, and to stimulate us to put forth our very best efforts in order that it may become true of us what the great Physician said, "and greater works than these shall ye do!"

SCHOOLCRAFT.

A very interesting and profitable meeting of our Society was held at the Hotel Ossawinamakee, Manistique, on January 30th.

At the business meeting two papers were read before the Society, "Medical Ethics," by Dr. J. M. Sattler, and "Certain Forms of Dyspepsias Met by the Country Practitioner," by Dr. J. M. Lipson, of Germfask.

Dr. S. S. Hackwell, of Germfask, was elected to membership. We have now but two physicians in Schoolcraft County who are not members of the Society.

After the business meeting a splendid banquet was served to the members of the Society, their wives and a number of invited guests. Following is the program of toasts:

Dr. J. M. Sattler, Toastmaster.

Our County Medical Society....Dr. T. A. Felch
 Councilor 12th District
 The Pioneer-Doctor.....Dr. O. C. Bowen
 Our GuestsDr. C. M. Livingston
 The Medical Profession.....Dr. J. H. Cole
 The Doctor's Wife.....Mrs. C. M. Livingston
 The Country Practitioner.....Dr. C. S. Layton
 The Ideal Doctor.....Dr. D. W. Roos
 The Doctor in Politics.....Dr. John M. Lipson
 The Medical Expert.....Dr. N. S. Campbell

It was decided that the banquet be an annual affair and held in connection with our regular January meeting.

G. M. LIVINGSTON, *Sec'y.*

SHIAWASSEE.

The regular monthly meeting of the County Society was held at Dr. A. M. Hume's new offices in the city of Owosso January 8, 1907, at 8 p. m. Twelve members were present. Dr. C. B. Stockwell, State president, who was to have addressed the society, sent a telegram stating that he was unavoidably detained.

After the routine business of the society was finished, Dr. A. M. Hume invited the society to Conner's cafe, where a bountiful banquet was awaiting them, after which they returned to his offices and listened to an enthusiastic inaugural address by President T. N. Yeomans. A vote of thanks was given Dr. Hume by the society for his hospitality. The remainder of the evening was spent in an interesting and informal discussion of the many problems of the society and the doctor.

Dr. Yeoman's address follows:

To the Officers and Members of the Shiawassee County Medical Society:

Gentlemen—First, I wish to express to you my appreciation of the honor which you have conferred upon me; but inasmuch as I have not the words wherewith to thank you, I can only hope that during the coming year I may be able to be of some benefit to the society, and that when my successor is chosen I may leave the society better for my incumbency.

The efficiency of any organization depends to a large extent upon the efficiency of its officers, and of these, the one whose work is most essential to the well-being of the organization, is its secretary. Our society has been unusually fortunate in possessing a secretary who is both capable and conscientious, and his re-election bespeaks our appreciation of his work and our confidence in his ability.

The few words which I have to say could scarcely be characterized by so dignified a title as an inaugural address, but as we are at the opening of a new year's work, it may not be out of place to make some suggestions for the new year.

First, as to membership. We have at present a membership of thirty-nine, while we have over sixty physicians in Shiawassee County who are eligible to membership. It seems to me that it would be for the benefit of the society as a whole and for each individual member of the profession in the county, if a good share of these men could be brought into line with us.

This is of especial importance in view of the plans which the American Medical Association is now putting into practice. As you all probably know, a Council of Pharmacy has been appointed, the duty of which is to investigate the non-official remedies, and report to the profession the number and proportions of the ingredients in them, so that the profession may know what drugs they are prescribing and at the same time save themselves the expense of handling costly proprietary preparations, when they can get the same results from their own formulas.

I also wish to call your attention to a pamphlet which can be obtained from the A. M. A., which would be a good thing for every physician to have on the table in his reception room. I refer to "The Great American Fraud," by Samuel Hopkins Adams, on the patent medicine evil. The judicious distribution of these pamphlets among our patients would go a long way toward stamp-

ing out the evil of self-medication by the laity.

I would especially urge that during the coming year we seek to make our meetings as helpful as possible to each member of the Society. To this end, an especial effort should be made to get a good speaker to give a paper at each meeting, the aim being to have the subjects as practical as possible, and that one member of the Society be appointed to lead the discussion of each paper, that the Society may have the benefit of the experience of all. I would also suggest that several times during the year we hold smokers, serving a "Dutch lunch," and spend the time in getting better acquainted with each other socially, so that each will learn that the others are not so bad as their enemies have painted them. In order to accomplish these things, it will be necessary that every physician in the Society make an extra effort to be present at each meeting, and do his part for the welfare of the Society.

It would greatly assist the secretary in his work if any member of the Society who has a particularly interesting case, should report the same to him, so that he may know on whom to rely when he is looking for some one to fill up a program. In fact, it might be a good idea to set apart a little time at each meeting for the presentation and discussion of such cases.

To sum the whole matter up, let us make it our common aim during the coming year, that, "with malice toward none, and with charity for all," we shall all work together for the benefit of the Shiawassee County Medical Society, the closer union, and best interests of the medical profession of Shiawassee County.

ST. CLAIR.

The officers of the St. Clair County Medical Society for 1907 are: President, T. E. DeGurse, Marine City; Vice-President, G. H. Treadgold, Port Huron; Secretary-Treasurer, A. J. MacKenzie, Port Huron.

A. J. MAC KENZIE, *Sec'y.*

TUSCOLA.

The following letter has been sent out to members of the County Society:

At the last regular meeting of the Tuscola County Medical Society the following resolutions were unanimously adopted:

"Resolved, That a minimum fee of \$5 be

charged for old line life insurance examinations, and that a minimum fee of \$2 be charged for fraternal insurance examinations. Further be it

"Resolved, That any member of this society who shall make examinations at a lower fee shall be considered guilty of unprofessional conduct. And be it further

"Resolved, That the secretary be instructed to send a copy of these resolutions to the various insurance companies doing business in Tuscola County."

You no doubt are familiar with the contention that has been going on throughout the country since the old line life insurance companies reduced the fees from \$5 to \$3. This reduction coming at a time when insurance officials were getting enormous salaries, when the nation was particularly prosperous and when the cost of living was continually increasing, provokes the profession to rebel and demand at least the old rate of \$5 for making medical examinations.

As for fraternal examinations, fraternal insurance in its inception in Michigan was taken largely as a semi-charitable institution and was so promulgated. It has long passed that stage, and is now recognized as an established business, with state and district agents under liberal salaries; therefore, we are no longer under obligations to render services at less than a fair fee.

We realize that one or two in any center can prevent the accomplishment of what we believe is a fair adjustment and we hope to have your assistance in the matter. You cannot but agree that in the end the whole profession, individually and collectively, will be benefited.

The regular quarterly meeting of the county society will be held at Caro, Monday afternoon, January 14. We hope to see you there.

If you are not already a member make a special effort to become one at this meeting. We need the assistance of every physician in the county to aid in adjusting the insurance examination fee question as well as many other perplexities that are confronting us. You need the influence of the societies to get the fullest measure of enjoyment from your practice.

We hope to have every physician in the country affiliated with us this year. Do your part to realize the consummation of this hope.

C. W. CLARK, Secretary.

W. C. GARVIN, President.

The officers of Tuscola County Medical Society for the year are: W. C. Garvin, Millington, pres-

ident; R. L. King, Caro, vice president; C. W. Clark, Caro, secretary and treasurer; H. L. Morris, Vassar, delegate; R. M. Olin, Caro, alternate.
C. W. CLARK, *Sec'y.*

Michigan Personals

Dr. George Crile, of Cleveland, was the guest of honor at the annual banquet of the Michigan Surgical and Pathological Society, January 23, where he read a paper on "The Transfusion of Blood."

Dr. William A. Cotton, of Escanaba, has been appointed by Governor Warner to the State Board of Education, to succeed Luther L. Wright.

Dr. Edward A. Florentine has returned to Saginaw to practice medicine, after four years of practice in the upper peninsula.

Dr. A. C. Potter, member of the Harper Hospital House Staff, has resigned, to accept a position as surgeon for the Babcock Lumber Co., Georgia.

Members of the medical profession at Lansing and Sault Ste. Marie have agreed upon and published a schedule of fees, to which all will adhere in so far as possible.

At a recent meeting, the Michigan State Board of Health adopted a resolution approving the examination of the eyes and ears of children in the public schools.

The board of directors of the Light Infantry have elected medical men as follows:—President, Lieut.-Col. Julius F. Henkel, brigade surgeon; vice-president, Major Vernon J. Hooper, surgeon; treasurer, Lieut. George H. Parmelee, assistant surgeon.

Dr. T. A. McGraw, Jr., of Detroit, is in the south, recuperating from a recent severe illness.

Born to Dr. James Hall Reed, of Battle Creek, a son, James Hall Reed, Jr., February 16.

Dr. A. W. Barrett has been appointed Professor of Psychiatry and Neurology at the University of Michigan, and will take immediate charge of these clinics at the University Hospital. The didactic work for the remainder of the year had already been provided for by the Regents.

Marriages

Dr. Vernon Alaska Chapman was married to Miss Marjory Smith, both of Muskegon, on January 28th.

Dr. Frank C. Witter, of Ann Arbor, and Miss Lena Lyle Armstrong, of Lapeer, were married at the bride's home on Feb. 14.

Vernon Alaska Chapman, M. D., was married on January 23, to Miss Marjory Smith, both of Muskegon.

Dr. Matilda May Beers, Secretary of the Berrien County Medical Society, was married, January 26, to Mr. A. S. Lindenfeld, of St. Joseph.

Deaths

Dr. M. W. Thacher, of Coldwater, died suddenly on February 2, of heart disease, at his home, aged 74.

Dr. Wm. E. Kennedy, of Muskegon, died on February 6, at his home; age 36.

Halsey B. Jenks, M. D., of Ypsilanti, died at his home, January 19, after a long illness, aged 64. Dr. Jenks was a graduate of the University of Michigan, 1870, and a veteran of the civil war.

William F. Hovey, M. D., of Bay City, died at his home on January 17, aged 72. He was a graduate of the University of Michigan, 1853, and a charter member of the Saginaw Valley Medical Society.

Frederick Stearns, Sr., founder of the firm of Frederick Stearns & Co., manufacturing pharmacists, Detroit, died on January 13, in Savannah, Ga., aged 75. Mr. Stearns had not actively participated in business for many years, but his name was constantly associated with the donation of collections of rare curios from different parts of the world. By his will the Children's Free Hospital of Detroit receives \$1,000.

Dr. Thomas A. Corlett, Detroit College of Medicine, 1892; died at his home in Manton, February 9, from angina pectoris, after a long illness, aged 43.

Dr. R. P. Comfort, of Nashville, Mich., died at his home on January 27, aged 58, from the effect of blood poisoning, contracted during the performance of a surgical operation. He was a graduate of the University of Michigan and of the Ohio State University.

Progress of Medical Science

MEDICINE

Conducted by

T. B. COOLEY, M. D.

Paravertebral Triangle of Dulness in Pleural Effusion (Grocco's Sign).—THAYER and FABYAN discuss this phenomenon in the light of their observations on 32 cases of pleural effusion. The sign first came to general notice after Grocco's communication in 1902, though it had been noted by others, and described by Koryanyi. It consists essentially in a small triangular area of relative dullness at the base of the sound lung next to the spine, with flatness on percussion down the spine to the line of flatness, and then on the sound side in lines parallel to the spine and to the lower line of lung resonance. The apex on the spine is slightly higher than the level of flatness on the affected side, and from this point the outer border runs down at an acute angle to the base of the lung. The cause of the phenomenon seems to be that the effusion extends over the bodies of the vertebrae, crowding the mediastinum and its structures to the sound side, and compressing somewhat the sound lung. The triangle is much diminished in size when the patient lies on the affected side, and increased by lying on the sound side. It is sometimes simulated in massive pneumonia, but here there is no change on change of position. THAYER and FABYAN found the sign present in 31 of their 32 cases, and in the one where it was not found, a case of interlobular empyema, its absence was a valuable diagnostic point. They believe the sign to be a constant and important one, and of especial value in the diagnosis of encapsulated effusions.—*Am. Jour. Med. Sci.*, Jan., 1907.

Acute Pulmonary Edema.—RIESMAN considers this subject of enough importance to merit a separate chapter in the text book. It has been described and discussed by a number of observers, beginning with Laennec. It is associated with a variety of affections which may be considered clinically as causes. RIESMAN classifies these as: (1) Arterio-sclerosis; (2) Bright's disease; (3) Heart disease—angina pectoris, myocarditis, valvular affections; (4) Asthma; (5) Acute infectious diseases; (6) Pregnancy; (7) Paracentesis of thorax and of abdomen; (8) Angioneurotic edema; (9) Obscure conditions of doubtful causal relationship (hysteria, etc.). Many theories have been propounded as to its pathogenesis. They are classified as: (1) The periaortic theory; (2) The cardiac theory; (3) The toxic, vasomotor theory; (4) The infectious theory; (5) The increased permeability theory. Vasomotor disturbances and a disproportionate activity of the two ventricles seem to be the chief factors. As to symptomatology, a

striking feature is the sudden onset, often when the patient is in a state of apparent health. The attack usually comes at night, with sensations of oppression and suffocation. There is intense dyspnea or orthopnea, with or without cough, and in typical cases there is copious, frothy expectoration, which may pour from the nose or throat, and reach the amount of one or two liters in one attack. Over the lungs are heard the characteristic bubbling and subcrepitant rales. The average duration is 3 to 6 hours, though it may extend to 24 hours, or be fatal in a few minutes. Death may occur in the first attack, or the attacks may extend over years, as in the reported case of 72 attacks. Diagnosis must be made from asthma, pulmonary embolism, acute dilatation of the heart, and uremic asthma. Six cases are described. In treatment, the best results are obtained from prompt venesection. Dry cupping may be of service in addition. Opinions differ as to the advisability of using morphin. Chloroform has been of great use. Nitroglycerin and stimulants may be indicated, but adrenalin should be used, if at all, with caution. Owing to the possibility of recurrence, an intelligent member of the family should be instructed as to the use of the dry cup, and perhaps of the hypodermic syringe.—*Am. Jour. Med. Sci.*, Jan., 1907.

Accidents Following Thoracentesis: Pneumothorax; Sudden Death From Exploratory Puncture.—SEARS confines his discussion to these two classes of accidents, and reviews the literature very briefly. With regard to sudden death after exploratory puncture, he expresses doubt as to the applicability of Russell's explanation of syncope due to afferent impulses conveyed to the medulla from irritated pulmonary branches of the vagus to all cases, and suggests the possibility of syncope and asphyxiation due to hemorrhage from a pulmonary vessel, citing a case at the Boston City Hospital. He believes that pneumothorax after tapping is more common than is generally supposed, and often overlooked when it causes no special symptoms. It is caused sometimes by an accidental reversal of the aspirating pump, but sucking in through an unguarded needle can hardly give rise to a pneumothorax of appreciable extent. In the majority of cases the cause is probably puncture of the lung, a tear in an adherent pleura, or the rupture of cavities or emphysematous bullae caused by the expanding lung. The great majority of the patients recover, though empyema and asphyxia from the sudden inrush of air have followed. Four cases are described.—*Am. Jour. Med. Sci.*, Dec., 1906.

GYNECOLOGY.

Conducted by

REUBEN PETERSON, M. D.

Symptoms of Cancer of the Uterus.—The evils of procrastination in the diagnosis of uterine cancer are emphasized by J. G. CLARK, who thinks that there is little danger of a too alarmist attitude in this matter. The old notion that marked irregularities, floodings and leucorrhea at the menopause are normal in any sense should be done away with. Another fallacy with serious consequences is the hereditary theory, the assumption too common in the past, that symptoms could not mean cancer because there was none in the family history. The fact that cancer is a disease of middle life also can not be too strongly emphasized. As he shows by a chart, at least 90 per cent of the cases occur between the ages of 40 and 50. Another fact on which stress has been laid is the importance of injuries of childbirth as a causative factor. Sampson has shown that in 412 cases only 3 per cent had not been pregnant. The suggestive signs calling for an exhaustive examination in a woman between 22 years of age and the menopause are given by Clark as follows: "1. Any deviation of the menstrual period in the way of excess or an intermenstrual discharge, especially in women beyond 30 years of age. The most suspicious of these are: (a) a mere show after slight exertion, defecation or coitus; (b) increasing length of the period, even if only one day more than has been her established habit. Every woman is a law to herself in this respect. 2. An exacerbation in amount or change in character of the discharge in a woman who may have had a simple leucorrhea for months or years. Of these changes a free aqueous, acrid, or blood-tinged discharge is especially portentous. 3. A leucorrheal discharge in a patient who has never had it before. 4. Every atypical discharge in a woman after the menopause. These individuals are especially liable to cancer and should, if possible, be even more exhaustively examined. 5. Pelvic pain of more than a few days' duration should be an urgent reason for examination, although it is very seldom an early symptom of cancer. Clark insists on the use of the microscope, especially when in doubt as to the diagnosis from the early symptoms. In case of cancer of the fundus of the uterus the microscope becomes the principal diagnostic aid.—*Jour. A. M. A.*, Dec. 8, 1906.

Radical Operation in Uterine Cancer.—A. VON ROSTHORN, Heidelberg, while he sees hope in the researches as to the nature of cancer and recognizes future therapeutic possibilities, admits that our present resource is in surgery, and since cancer is, in its beginnings, a local disease, the importance of early operation is self-evident. We can not, nevertheless, assure ourselves of the absolute restriction of the disorder, even when first recognized, hence the need of thoroughness in operation, and he points out the advantages of the abdominal method in securing this. There are certain limitations even to this, and he goes at length into the discussion of the method by which the cancer extends itself by way of the lymphatics. In the future, he thinks, we must direct our efforts to the selection of cases that give promise of favorable results, for surgery will be of no avail when the disease has extended beyond certain limits. The system should be thoroughly built up before operating. The narcosis should be shortened as much as possible, the danger of infection during operation must be carefully guarded against, and he goes to some length into the various details of technic which he thinks will be advisable in our future work. Cases of cancer must be examined more carefully as regards their morphologic characteristics and their clinical types, and we should investigate further the conditions and phenomena of recurrence. He concludes with the following suggestions: "1. The abdominal operation is the most rational for the treatment of carcinoma of the cervix, since by its employment the most extensive removal of the parametric tissue is made possible. 2. The view that glands are involved only in later stages of the disease must be dismissed, and the fact that we sometimes find participation of the glands in the very early stages of uterine cancer has convinced me of the necessity of removing the glands in all cases, as I have always done. 3. Based on my own experience, I urgently advise it as our duty to operate in cases of recurrence which have not advanced too far for such procedures. On this account alone it is important to re-examine at frequent intervals (every eight weeks) after the primary operation."—*Jour. A. M. A.*, Dec. 8, 1906.

PATHOLOGY AND BACTERIOLOGY

Conducted by

A. P. OHLMACHER, M. D.

The Early Diagnosis of Tuberculosis.—

HAROLD R. D. SPITTA reports his experiments in connection with Marmorek's method for the early diagnosis of tuberculosis, which has promised to be available in such conditions as tuberculous meningitis in which the clinical symptoms are so veiled and obscure that it is often a matter of difficulty to make a definite diagnosis.

Based on his studies SPITTA draws the following conclusions:

1. That the subcutaneous inoculation of tuberculous material, followed by an intra-cerebral injection of diluted tuberculin, causes within a period of six hours a rise in the body temperature of certain selected animals.

2. That this rise of temperature is not, of necessity, influenced by or dependent on the nature, number or virulence of the tubercle bacilli.

3. That this rise of temperature varies within comparatively wide limits, is not constant, and not of sufficient uniformity to serve as a basis for diagnosis.

4. That a definite though variable rise of temperature follows the intra-cerebral injection of diluted solutions of tuberculin within a period of six hours in healthy, tubercle-free animals, and that this in some cases is equal to the rise of temperature which follows the injection of tuberculous matter and tuberculin, but in the majority of instances is several tenths of a degree C. less.

5. That the operation of trephining has no influence on the causation of this rise of temperature.

6. That the normal temperature of a guinea-pig in health may vary as much as 1° C., and often 0.5° C., within a few consecutive hours.

7. That Marmorek's contention that a rise in the body heat of 2° C. or more follows the inoculation of tubercle bacilli and tuberculin within a period of six hours is by no means always observed, even when virulent tubercle bacilli are present in large numbers.

8. That in its present state of development the method suggested by Marmorek is unsuitable for routine diagnosis for early tuberculosis.—*The Journal of Pathology and Bacteriology*, Volume XI, No. 4.

The Distribution of Spirochaeta Pallida in the Tissues of Congenital Syphilis.—The very beautiful preparations of spirochaeta pallida which SCHULTZ has obtained and on which his report is based were the result of applying Levaditi's method. This procedure consists, in brief, of the silver nitrate impregnation, in bulk, of formalin hardened tissue, followed by reduction by means of pyrogallie acid. The tissue is then imbedded in paraffin, the sections cut and

stained with Giemsa's stain, or toluidin blue. This is the method that we have used in our work. It gives most satisfactory results and beautiful preparations. Levaditi and Manouélain's later and more rapid process, in which pyridine is added to both the impregnating and the reducing solutions, seems to be better for fresh tissues removed during life, but less satisfactory for autopsy material. In our experience, counter staining with toluidin blue gives better preparations than does Giemsa's stain. By this method the nuclei are stained green. The cytoplasm and intercellular substances take varying shades of brown. The spirochaetae are colored a uniform deep black. They appear considerably thicker than when stained with Giemsa's stain. They are easily seen with a four ocular and a one-twelfth-inch immersion objective, and, after the eye has become accustomed to them, may even be found with a high dry objective. In the silver impregnated tissues the organisms retain their characteristic short, close spirals and cannot be mistaken for normal or pathological tissue constituents. In certain cases the spirals are less close than normal and more irregular, while the thickness of the organism is considerably increased.

The autopsy material from two infants with congenital syphilis formed the material studied, and from which SCHULTZ concludes as follows:

The two cases here reported confirm the findings of Levaditi, of Buschke and Fischer, of Mucha and Scherber, of Herxheimer and Opificius, of Gierke, and of Paaschen.

In sections the organisms have the same characteristic morphology that they have in smear preparations.

Treponema pallidum (spirochaeta pallida) bears a definite relation to the lesions of hereditary syphilis.

It is, to a marked degree, an intracellular parasite, glandular epithelium being particularly vulnerable.

The connective tissue new-formation, so characteristic of syphilis, is due in part to this destruction of parenchyma cells, in part to a stimulation of the connective tissue. In those cases of congenital syphilis in which the mother is diseased, infection occurs by way of the placental circulation. Multiplication of *Treponema pallidum* occurs chiefly in the perivascular lymphatics and within the tissues themselves; not within the larger blood vessels. The peri-arteritis, which occurs in syphilis, is due to this perivascular localization of the organism. The protozoan nature of the organism has not been proven. It does, however, appear probable.—*The Journal of Medical Research*, Vol. XV., No. 3

PHARMACOLOGY AND THERAPEUTICS

Conducted by

C. W. EDMUNDS, M. D.

Effect of Potassium Iodide on Arterio-sclerosis.—CUMMINGS and STOUT have carried out a study of the effects of potassium iodide upon the arterio-sclerosis which is produced experimentally in animals by the injection of adrenalin. In one series of animals, adrenalin alone was given and these all showed post mortem sclerosis of the aortas.

In series number two, potassium was given at the same time as the adrenalin and at autopsy the arteries showed no signs of disease.

In the third series, the potassium iodide was withheld until such a time as sclerosis would probably have developed from the adrenalin. These animals all showed extensive valvular disease.

While the experiments were too few in number to draw any absolute conclusions, they seem to indicate that while the iodide may prevent sclerosis, it has no curative effects, if the disease is once established. Their results therefore seem to confirm those of earlier writers.—*Uni. of Penn. Medical Bull.* V. XIX., p. 101.

Chloral in Scarlet Fever.—ROYER reports the results obtained in the Municipal Hospital of Philadelphia by the use of chloral hydrate as a routine measure in 800 cases of scarlet fever, and contrasts them with 756 cases treated by the usual remedies. The chloral was given in doses sufficient to cause light somnolence and in such amounts it did not appear to cause circulatory depression.

The beneficial effects of the drug were seen in a great improvement in the nervous symptoms, which it relieved better than any other remedy. It also allayed the itching of the skin which is often very annoying. When given as a routine during the febrile period and for some days after, postfebrile nephritis appeared to be less frequent.

ROYER believes that the results obtained would justify a more extended use of chloral in the treatment of scarlet fever.—*Therapeutic Gazette.* V. XXXI., p. 3.

Treatment and Prophylaxis of Influenza.—SIR WILLIAM BROADBENT recommends quinine on the first invasion of influenza. He says he usually prescribes one drachm of ammoniate quinine and two drachms of liquor ammoniae acetatis every hour, for three hours, and then every four hours. In fulminating attacks accompanied by coma, he gives quinine hydrobromate in large doses and in this way has relieved the unconsciousness.

As a prophylactic measure during the prevalence of an epidemic, he orders two grains of quinine daily. The results obtained seem to justify its use, although it does not act as an absolute prophylactic. BROADBENT mentions some interesting examples occurring among large groups of persons apparently all equally exposed, in

which those taking the quinine escaped the disease while the others were attacked.—*Practitioner.* Vol. LXXVIII, p. 13.

Silver Salts in the Treatment of Gonococcal Conjunctivitis.—DE SCHWEINITZ in a valuable article on the subject gives the results of his experience with the various silver salts.

He considers nitrate of silver (2% solution) the best remedy we have when properly applied. This is best done by means of a cotton mop, the conjunctiva being irrigated both before and after the application of the silver solution.

Protargol, he does not think possesses a single advantage over the nitrate and it is not nearly as certain in its action. He has given up its use entirely.

Argyrol while being perfectly bland and non-irritating, is not to be relied upon alone, but may be used in conjunction with silver nitrate. Any good effects from this drug, he thinks, are due to its power of diffusing into all the folds of the conjunctiva and mechanically floating out the pus. It must, therefore, be constantly applied in order to keep sufficient of the solution in the sac. DE SCHWEINITZ describes this as the "immersion plan," which is only to be used in conjunction with the nitrate.—*Therapeutic Gazette.* Vol. XXXI, p. 4.

Vascular Depressants.—Among the various drugs used to lower blood pressure, SOUNDBY prefers erythrol tetranitrate, which possesses the great advantage over nitroglycerin that its action is much more prolonged. The effects of a single dose will last for about four hours and there are rarely any unpleasant symptoms, although in some cases its administration is followed by headache, which may be severe enough to necessitate the withdrawal of the drug. SOUNDBY usually gives it every four hours, while the patient is awake and sometimes combines it with digitalis or some of its purer preparations, such as digitaline.

Nitroglycerin has proved a valuable drug in cases of advanced heart disease in which there were symptoms of an anginal character. He has such patients carry a small vial containing two or three minims diluted with a small amount of water all ready for use. He prefers such a method to the use of the tablets, which he has found were very uncertain in their action.

The value of potassium iodide in combination with other cardiac remedies probably depends upon its action as a valvular depressant.

Belladonna plasters, at times, will relieve cardiac pain, but they are inconvenient and dirty.

Timely bleeding is the most efficient and rapid method of relieving the burden of the heart, but it cannot be repeated except at long intervals. It will, however, occasionally tide a patient over a critical period. *Bri. Med. Jour.*, No. 2390, Oct. 20, 1906.

NEUROLOGY.

Conducted by

C. W. HITCHCOCK, M. D.

Seventeenth Annual Report of the New York Commission in Lunacy.—Although state documents have commonly that somewhat forbidding aspect which attracts but few to open and scan their pages, this one presents much that is of interest to those at all desirous of keeping in touch with modern institutions for the insane.

It is well known that, in spite of their high character (and the New York Asylums are the parents of our Michigan institutions, for Dr. VanDusen came from Utica to open the first Michigan Asylum at Kalamazoo, in 1858) their level has not been above the reach of the turbulent waves of "politics." It is not long since political agitators brought about the abolition of the efficient local boards of managers for each institution and attempted to more concentrate the management of the various asylums. Now the pendulum has again swung the other way, and the insanity law has been so changed that each hospital again has its local board, composed of citizens residents in its district, two of whom should be women, and it is gratifying to note that the State Commission in Lunacy, which exercises a general supervision of all of the hospitals, considers that under this plan these institutions receive more careful personal observation on the part of the hospital boards than at any other time.

This volume is of special interest in that it presents to the reader the interests of all of the different institutions, something of their interrelations and general plan of management.

With the advent of the Psychopathic ward at the University (Michigan), in charge of an expert pathologist who is to give periodically instruction to the assistant physicians of the Michigan Asylums, Michigan still more closely follows the plan upon which the New York Hospitals are managed. The scientific side of their work is especially inspired from the Pathological Institute under the directorate of Adolf Meyer, an indefatigable and enthusiastic worker who has as his assistants a Chief Associate in Neuropathology, Associate in Clinical Psychiatry, Photographic Assistant, Assistant for Autopsies, etc., etc.

It is of sociological interest to know how a great state provides for its insane, and it is worth while to note that the Empire State provides for this class of its unfortunate thirteen institutions with a total capacity of 23,525, but with an actual number of patients of 25,432, showing that the State of New York faces much the

same general conditions as those obtaining in Michigan.

The Pathological Institute has not only given instruction in pathological technic, but it has sought to systematize generally the scientific work of the hospitals, has encouraged the use of common forms and the more scientific study of all clinical material.

This results not in the mere accumulation of ultra-scientific data, but redounds to the practical benefit of all so unfortunate as to be patients, in the more thorough, earnest and purely scientific study of their cases. Psychiatry in these days is taking long strides forward and New York is in line to be abreast of the best. May we not congratulate ourselves that Michigan follows closely in her wake?

The medical profession should take a more active interest in the work of our Asylums than is often manifested and it is noteworthy that the need has been felt of fostering a closer and more intelligent relation between the practicing physicians of each district and its hospital. Such a promotion of closer relations would do much to break down prejudices and cultivate broader and more intelligent views of the work and needs of the asylums.

Much is found in this report of scientific value. New remedies and new methods of treatment, fresh air treatment, typhoid treatment, and hydrotherapy are here discussed.

The vexed subject of classification is discussed both by the Director of the Pathological Institute and by the late Dr. Dent, Superintendent of the Manhattan Hospital, in an earnest, thoughtful and scientific way. While they are compelled to report a table of statistics conforming data to: "Alcoholic Insanity; General Paralysis; Senile Insanity; Epilepsy with insanity; Imbecility, idiocy with insanity; Other psychoses; and Not insane,"—there is much rebellion and "carping criticism" among those who have to "slavishly follow" so utterly inadequate a classification as the foregoing; yet Dr. Meyer frankly admits that "an absolutely clean-cut classification is not to be expected, unless the number of groups be made unwieldy and therefore an obstacle," yet he earnestly takes up the effort to work out a classification which shall at least make for a better scientific basis of the study of mental diseases.

Altogether, this report shows so much high-minded earnestness in the study of the insane and their management as to be well worthy of thoughtful perusal.

LARYNGOLOGY.

Conducted by

J. E. GLEASON, M. D.

Examination of the Throat in Chronic Systemic Infections.—GOODALE considers the lymphoid ring as a portal of infection for cervical adenitis and infectious arthritis. In a series of cases he was able to demonstrate that tubercular cervical adenitis may exist in association with tuberculosis of the tonsils, with or without visible changes in these structures. He shows also that a form of cervical adenitis occurs which is accompanied by distinct enlargement and subacute or chronic inflammation of the tonsils, and disappears after excision of the latter. In the first case it is reasonable to suppose that the bacilli penetrate from the tonsil, in the second that absorption of toxins generated in the tonsils takes place, the removal of which affords immediate relief. Bacteria without doubt enter through the lacunar epithelium, the crypts constituting more or less sheltered harbors. It is chiefly in tonsils undergoing rapid proliferation, or those which have already obtained a considerable degree of hypertrophy that the loose character of the epithelium of the lacunae is marked. Retention of detritus in the lacunae is favored by cicatricial contraction around the orifices, adhesions to the pillars and by retrograde metamorphosis. These two factors, loose lacunar epithelium and retention are the two chief factors predisposing to systemic infection. Infection may enter through a tonsil, even though it is normal in appearance, provided the micro-organism is present in the throat and suitable predisposition exists on the part of the host. Non-tubercular cervical adenitis from toxin absorption would theoretically be accompanied by visible alterations in the tonsils, characteristic of lacunar retention. In chronic infectious arthritis, since inspection and careful clinical examination may fail to disclose deep seated collections of detritus, it would seem wise if other points of infection can be eliminated, to extirpate the tonsils in the most thorough manner possible. *The Laryngoscope*, December, 1906.

Congenital Laryngeal Stridor.—LOGAN TURNER discusses the etiology of this affection, the symptoms of which, to avoid confusion, are given as follows: the infant, normal in other respects, shortly after birth begins to breathe nosily, with a croaking sound during inspiration. Expiration may be accompanied by a short croak, when the stridor is loud, but at other times it is noiseless. Occasionally there are brief intervals with no sound, but generally the noise is con-

stant during waking hours and sometimes when the child is asleep. The child's power of crying and coughing is not affected, and there is not the slightest distress or cyanosis. There is, however, marked inspiratory in-drawing of the thoracic and abdominal walls except in the mildest cases. The stridor increases in loudness during the first few months to gradually disappear during the second year of life. The author, after discussing adenoids, enlarged thymus and congenital deformity of the upper aperture of the larynx as etiological factors, comes to the conclusion that the true cause is an acquired deformity of the upper aperture, result of a disturbance of coordination of the respiratory movements, probably due to some developmental backwardness of the cortical structures which control them. There is a constant recurring sucking in of the soft structures which form the aperture, so that an exaggeration of the infantile type results. This type is well recognized by anatomists, the soft parts including the epiglottis being much softer and more collapsible than they are in an adult. Experiments conducted by the author on extrinsic larynges of still born infants and children up to the age of ten years, proved that by forcible inspiration of air, the lateral margins of the upper aperture of the larynx are drawn together so that only a narrow slit remains. The epiglottis could also be drawn downward and backward and the arytenoid cartilages approximated in the median line, the margins of the anterior part of the aperture remaining unaffected. The upper aperture of the larynx of a still born infant is relatively wider than that of an infant which has breathed. This corresponds with the observation that by repeated experiments the parts could be approximated permanently. The assumed form strikingly resembling the deformity figured in fatal cases. As the child grows, changes take place, the epiglottis becomes expanded, the aryepiglottic folds are separated and the aperture is in consequence broadened. In very young children the respiration is irregular in rhythm and force. There often occurs therefore, relatively sudden respiratory efforts. This is the primary factor which with the thin, lax folds of the aryepiglottic ligament produce a narrowing of the laryngeal aperture and a more or less constant condition of stridulous breathing. *Annals of Otology, Rhinology and Laryngology*, Dec. 1906.